REPORT RESUMES

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SURVEY REPORT--NAVAJO COMMUNITY COLLEGE.
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THIS PLAN FOR THE ESTABLISHMENT OF A NAVAJO JUNIOR COLLEGE GOES INTO ALL ASPECTS OF ITS ORGANIZATION. IT DESCRIBES THE PRESENT NAVAJO SCHOOL SYSTEM, WHICH IS A COMBINATION OF MISSION, PUBLIC, AND BUREAU OF INDIAN AFFAIRS OPERATIONS. FINANCIAL HELP TO STUDENTS WANTING MORE THAN A HIGH SCHOOL EDUCATION IS PRESENTLY INADEQUATE, THROUGH INCREASING. IF THERE WERE A COLLEGE ON THE RESERVATION, MANY MORE STUDENTS COULD BENEFIT FROM THIS AID AS WELL AS FROM THE PROXIMITY OF THE INSTITUTION. THE LESS ABLE, WHO ARE EXPECTED TO REQUIRE ONLY SHORT-TERM VOCATIONAL COURSES, WOULD BENEFIT THE MOST. BESIDES THE GENERALLY ACCEPTED GOALS OF A JUNIOR COLLEGE, THIS ONE MUST ALSO CONSIDER THE SPECIFIC NEEDS OF THE NAVAJO PEOPLE. FOR THIS REASON, THE IMPORTANCE OF THE GUIDANCE PROGRAM IS EMPHASIZED, AS IT MUST HARMONIZE THE NAVAJO NATIONAL CULTURE AND THE DOMINANT CULTURE OF THE "OUTSIDE WORLD." PROGRAMS IN AGRICULTURE, AT ALL LEVELS OF COMPLEXITY AND SKILL, WOULD BE OF IMMEDIATE BENEFIT TO THE WHOLE NAVAJO COMMUNITY. THE PLAN DETAILS THE STAFF NEEDS, THE OVERALL PROGRAM REQUIREMENTS, RECOMMENDIONS FOR THE PHYSICAL PLANT, A THE DIFFERING LEGAL AND FINANCIAL CONSIDERATIONS IN ARIZONA AND NEW MEXICO. APPENDIXES CONTAIN PRECISE OUTLINES FOR THE ESSENTICURRICULU CURRICULUMS, AS WELL AS SAMPLES OF THE QUESTIONNAIRES SENT TO NAVAJO COLLEGE STUDENTS, HIGH SCHOOL GRADUATES, AND PARENTS OF HIGH SCHOOL GRADUATES. 'HH)

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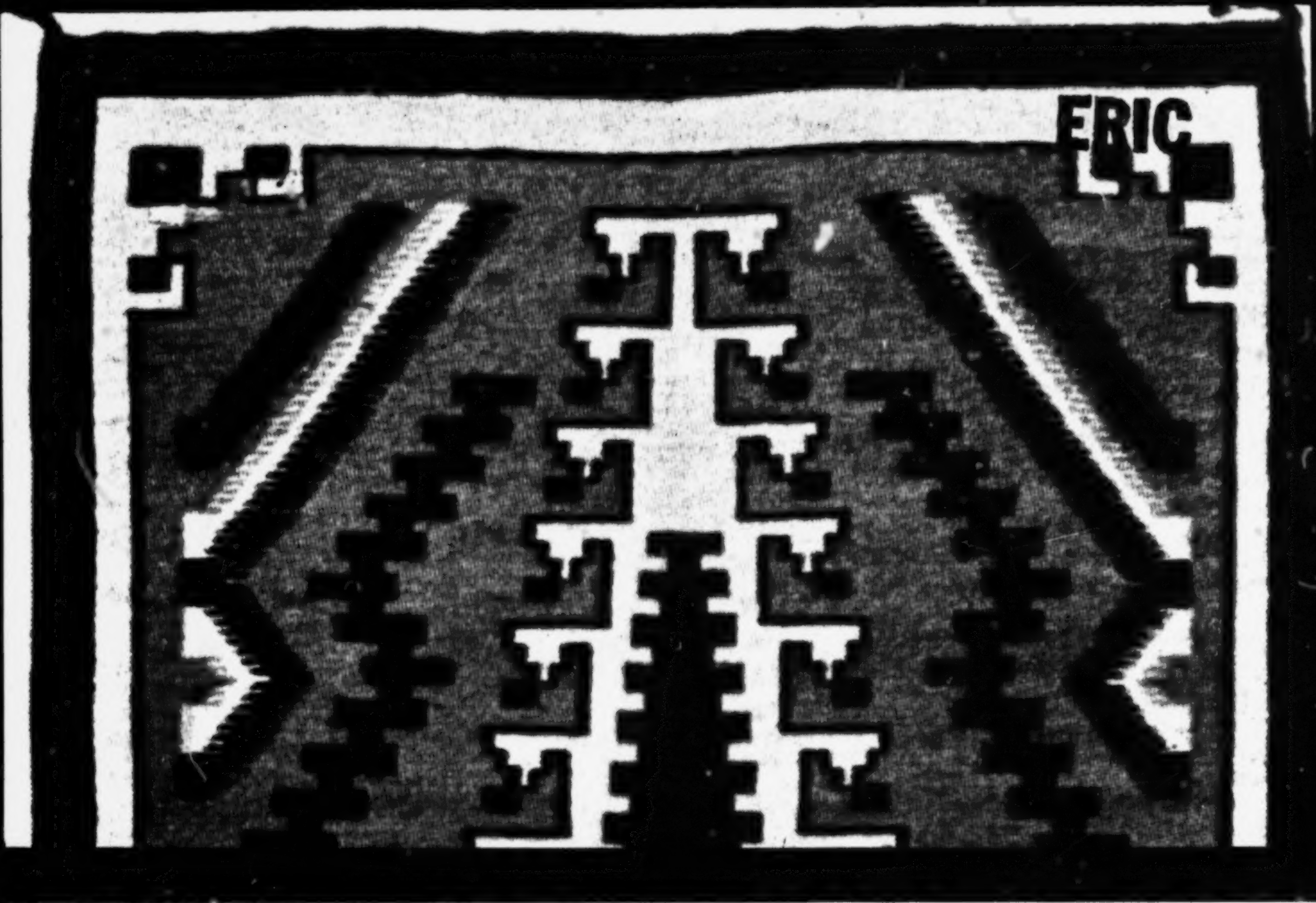
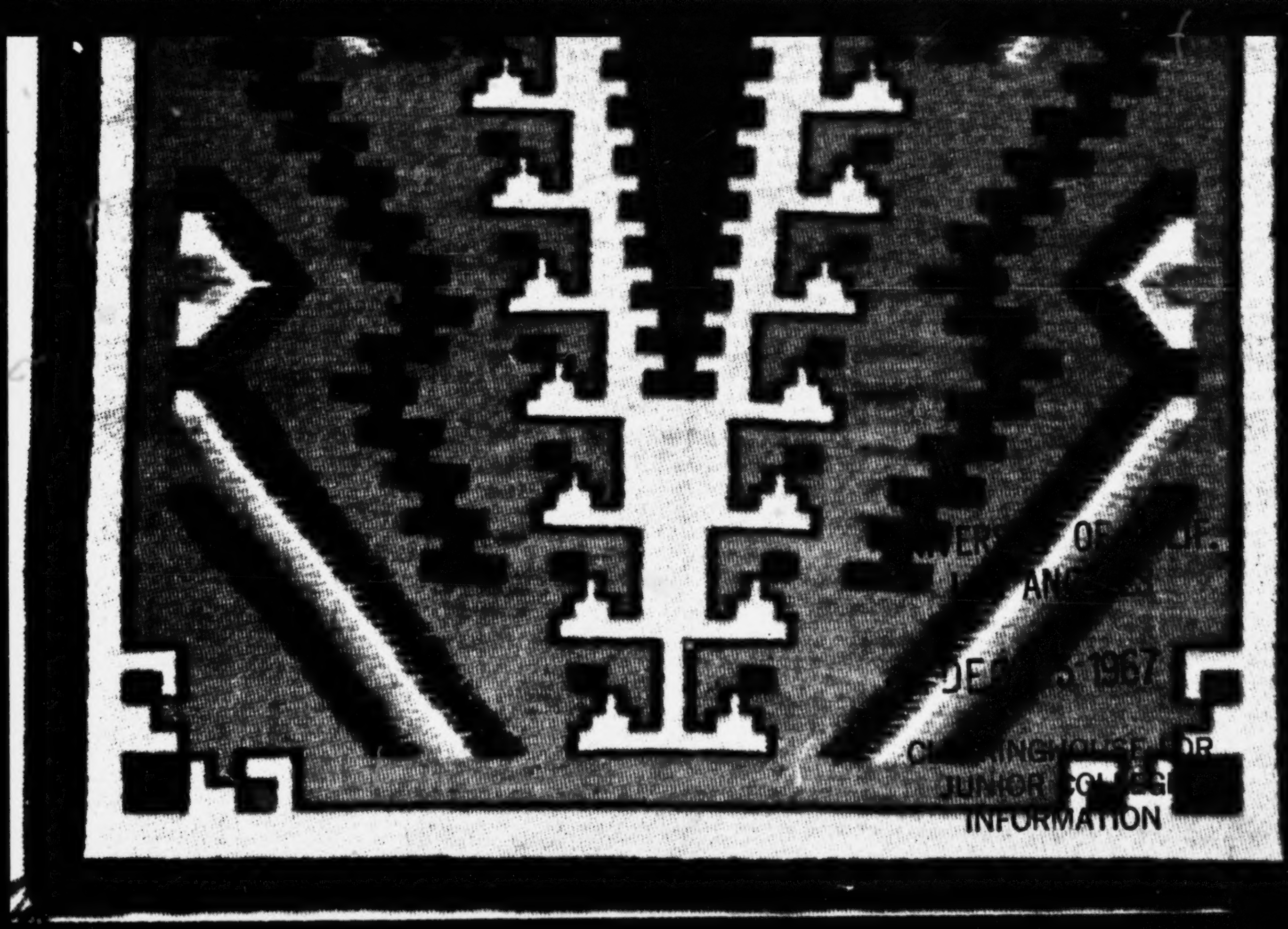


SURVEY REPORT

NAVAJO COMMUNITY COLLEGE

Bureau of Educational Research and Services
Arizona State University
February, 1966



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SURVEY REPORT

NAVAJO COMMUNITY COLLEGE

Bureau of Educational Research and Services

College of Education

Arizona State University

February, 1966

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Grateful acknowledgement for cooperation with the staff and contributions to the survey is made to Raymond Nakai, Peter MacDonald, Allen Yazzie, John Martin, and other Navajo Tribal officials; officials of the Bureau of Indian Affairs; the U.S. Employment Service; the U.S. Public Health Service; Farmington Chamber of Commerce; public school, college and university officials in Arizona and New Mexico; members of the State Board of Directors for Junior Colleges from Apache and Navajo Counties; and members of the Navajo Tribe.

Letter of Transmittal

To: Office of Navajo Economic Opportunity
Navajo Tribe
Window Rock, Arizona

Re: Community Action Program, Grant Number 216

Attention: Mr. Raymond Nakai, Tribal Chairman

The Navajo Community College Survey Report is submitted for your study and reference. This report represents the concensus of the survey staff after extensive study and analysis of all factors involved.

Approximately 30 consultants, including nationally recognized authorities on community colleges and specialists in curriculum fields generally associated with community college programs, participated in the survey. A number of visits by members of the survey team and consultants were made to public schools, tribal and federal offices and other sites on the reservation to gather pertinent data. The comprehensiveness of the report would not have been possible without the cooperation of officials of these institutions.

The report indicates that a community college is strongly desired by the Navajo people and that its establishment is legally and financially possible. However, it is not likely that a community college will materialize unless the tribe takes the initiative to cooperate with other residents of Navajo and Apache Counties in establishing a joint-county junior college district.

The survey staff believes that this report will be of significant value to the tribe and to the staff of the proposed college in providing appropriate educational opportunities through a Navajo community college.

Respectfully submitted,

Merwin Deever
Director, Bureau of Educational
Research and Services

FOREWORD

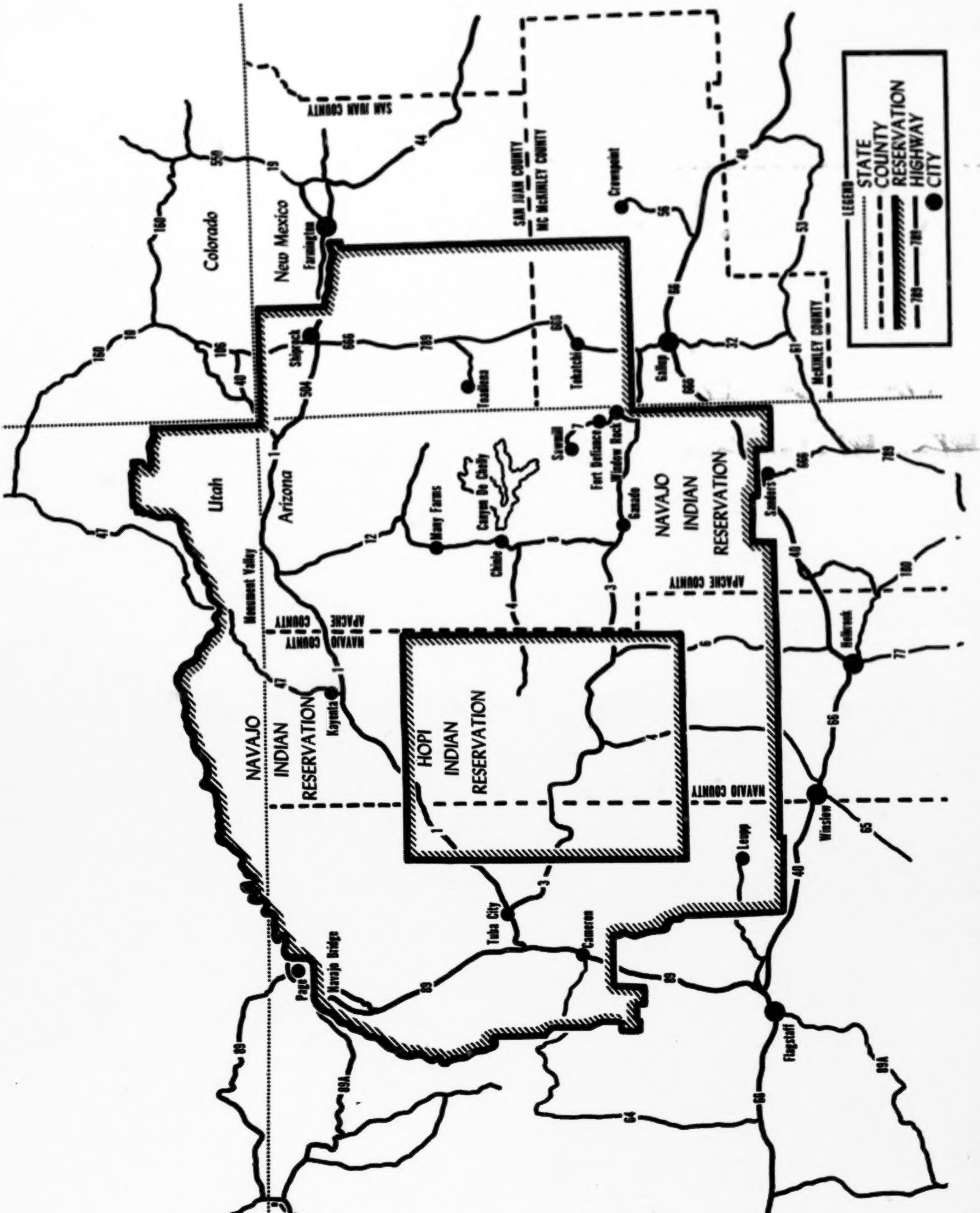
The Navajo Indian Reservation consists of 24,000 square miles in Arizona, New Mexico, and Utah. The area is roughly the size of West Virginia and is the largest reservation in the United States.

The Navajo people comprise the largest tribe in the nation, numbering approximately 107,000 reservation Indians. Their annual rate of growth significantly exceeds that of the national population. There are 41.5 Navajo births per 1,000 population compared with 21.2 per 1,000 population for the United States.

All Navajos do not live on reservation lands; many reside on public domain allotments, on railroad land, or on the public domain itself, outside the boundaries of the reservation.

The principal communities are the six headquarters locations of the administrative offices of the Bureau of Indian Affairs, the U.S. Public Health Service, and the Navajo Tribe. These are at Window Rock, Chinle, Fort Defiance, and Tuba City in Arizona, and Crownpoint and Shiprock in New Mexico.

Figure I is a map of the Navajo Reservation which shows state and county boundaries, reservation boundaries, principal roads, and principal communities.


Colorado
New Mexico
Utah
Arizona
NAVAJO INDIAN RESERVATION
HOPI INDIAN RESERVATION
NAVAJO INDIAN RESERVATION
SAN JUAN COUNTY
McKINLEY COUNTY
APACHE COUNTY
NAVAJO COUNTY
Farmington
Shiprock
Toadlena
Tohatchi
Crownpoint
Gallup
Sawmill
Fort Defiance
Window Rock
Ganado
Chinle
Many Farms
Canyon De Chelly
Monument Valley
Kayenta
Tuba City
Cameron
Leupp
Winslow
Holbrook
Sanders
Flagstaff
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Navajo Bridge
LEGEND
STATE
COUNTY
RESERVATION
HIGHWAY
CITY

Fig.1 Map of Navajoland

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CHAPTER I

A LOOK AHEAD: NAVAJO COMMUNITY COLLEGE, 1975

The purpose of this survey was to determine the need for a community college for the Navajo Indians. It was assumed by the tribe that such a college would be an instrument for developing responsibility and leadership among Navajo youth. The survey team concurs with the assumption and considers such an institution a necessity for community development. Such an institution will not be easy to obtain, either from the legal or financial standpoint. However, a community college seems to be possible and desirable, and is therefore recommended.

This first chapter is a description of the possible growth and development of a two-year college on the Navajo Reservation. No such college has ever existed, but ten years from now, the following story might be written. The philosophy and procedures might be adopted by junior colleges in New Mexico to provide the same kinds of learning experiences and activities for Navajo youth and Navajo adults. This story is fictitious. However, it describes the kind of community college that the survey team visualizes for Navajoland.

I. THE SETTING

As early as 1959, members of the Navajo Education Committee began thinking about the possibilities of a junior college for the reservation. However, it was not until 1965, when the United States Government made money available to the Navajo Tribe for a Community Action Program, through the Office of Economic Opportunity, that a detailed study of such a junior college was made possible.

By 1965, it was apparent to tribal leaders that many things were happening on the reservation which made it imperative for members of the tribe to become better educated so that they might be better participants in their own government and in the government of the state and nation. The Navajo population was increasing more rapidly than the economic development. The birth rate was double the average for the United States. An estimated sixty to seventy per cent of the labor force on the reservation was unemployed. Job opportunities were scarce and almost non-existent. Lands had been overgrazed and livestock could not provide a living for more than one-third of the population. Roads had been built, both by the tribe and the federal government, making parts of the reservation accessible to tourists. Navajo families were moving into communities that were developing on the reservation. This was possible because of improved roads and pick-up trucks. However, housing for Navajos was very inadequate by national standards. About 80 per cent of the families were living in one room houses.

The Navajo tribe had set aside $10 million in a trust fund so that Navajo youth might be educated beyond high school. But by 1965, the interest from the trust fund (about $400,000 yearly) was inadequate to provide opportunities for all the high school graduates. In fact, fewer than one-third could be selected and given the educational opportunity.

Living conditions on the reservation were changing and some Navajos resisted the change. The motor vehicle permitted people to travel and see how other people lived. The radio, especially the transistor battery-powered set, had found its way into nearly all the hogans, log cabins, and frame houses. Radio stations in nearby communities were using Navajo disc jockeys to provide a service and assist merchants in advertising programs. Style of dress was changing rapidly. The Navajo man was cutting his hair and was wearing western dress. Both men and women continued to wear Navajo jewelry, but school-age boys and girls were wearing clothing that matched that of the typical child in any school of the Southwest.

Navajo families moving to the developing communities on the reservation wanted better housing and when incomes permitted, the purchases were arranged. The sanitary conditions on much of the reservation were primitive. The tribe had invested large sums of money in the development of wells so that people and livestock could have water. In several communities, the tribal government had cooperated with the Federal Public Health Service in developing sewage disposal systems with main trunk lines. Few houses had been built to make use of the systems.

The Navajo people had a great interest in education and had abundant faith in the value of an education. It was thought that education would help in self-government as well as in making life more livable. The Navajo wanted to live on the reservation. That was home. His desire to live in harmony with nature and his fellow man seemed to dictate that he live in the community of mountains, the painted desert, and beautiful landscapes. All of these things seemed to lead to the conclusion that a college on the reservation would be good for his people.

II. ORGANIZING A COMMUNITY COLLEGE

In 1965 there was no college on the Navajo reservation. However, two branch colleges were near to the Navajo Reservation, one at Gallup and one at Farmington. Both were primarily academic in nature, serving their parent institutions. Enrollment was low and the number of Navajo students was small. The nearest college in Arizona was Arizona State College, soon to become Northern Arizona University. It was not legally possible for either Apache County or Navajo County to organize a junior college district under the Arizona System of Junior Colleges. However, it was legally possible for these two counties to form a district. Any other organization under existing laws would not be feasible because the state finance program for other types of junior colleges was inadequate. It was decided that a community college in the Window Rock-Ft. Defiance area was the best location. This decision was made because Window Rock is the capital of the Navajo reservation, the center for tribal government, and also the center for many federal government activities, including those of the Bureau of Indian Affairs and Public Health Service. These operations provided the greatest potential for educational programs due to job opportunities in the area.

The only possibilities for a college would be (1) to encourage Apache and Navajo Counties to join together to form a junior college district and establish one campus on the reservation, or (2) encourage an existing junior college district to provide a residence center on the reservation. A college on the reservation seemed imperative to meet the need of developing leadership and responsibility of the Navajo and also in developing the communities on the reservation.

Navajo tribal officials invited representatives of both Apache and Navajo Counties to meet with them to discuss ways and means of securing a Navajo Community College as a branch college; a college that would someday serve as many as 2,000 students.

The Navajo Education Committee was assigned the task of spear-heading the effort. The committee foresaw difficult problems but was determined to obtain a community college for the reservation. The biggest problem was in obtaining buildings. Money was scarce. However, the junior college board promised to spend, for operation and development, all state and county money generated by the campus. This is money which would normally support the community college if it were the only school in a separate district. It was agreed that the chief college administrator would work closely with the Navajo Education Committee in establishing educational programs and ways and means of financing the college. The committee's recommendations were accepted, almost without exception, by the official board.

Faculty and Staff

The administrative head of Navajo Community College was selected by the official board of the district, but with the advice and consent of the Navajo Education Committee. The man had a rich background of educational experience in another junior college and had a commitment to an "open door" policy and to community development. He was sympathetic to occupational training and the need for the school to assist the community in the development of its resources, including people. This executive went to work on July 1, 1967. By September of the same year he had recruited several part-time teachers in the area. Some federal government employees and some high school teachers and tribal government employees were among the part-time teachers. High school buildings were used for night classes.

The faculty members were carefully selected. Great concern was expressed to have instructors who were sympathetic to the philosophy of making Navajo Community College a real community college; not an institution sitting on the hill, apart from the realities of the reservation. More faculty members were added after new programs were developed with the aid of vocational advisory committees. Although a limited college transfer program was established early, occupational programs were given primary consideration during the formative years. It was not until many of these were developed that serious attention was given to enlargement of the transfer program. The early transfer program was limited but good. The faculty realized that the subject matter was not nearly as important as the attitude of the student, his development of good study habits, his willingness to work for accomplishment, and his determination to succeed in a four-year college upon completion of work in the community college.

The staff members were limited in number. The executive dean selected a good secretary who could take the responsibility for much of the detailed administrative work. As faculty were employed, student assistants were used in all areas possible. This was done for two purposes. The first was to save money and make it possible to educate the maximum number of Navajos with the money available. The second reason was equally important. It provided learning experiences for many students. Students served as part-time clerks, secretaries, custodians, maintenance men, groundsmen, and in other capacities.

III. THE EDUCATIONAL PROGRAM

As has been indicated, the educational program developed gradually and with primary emphasis on occupational programs and community development. Development had to be gradual because many buildings were built by students and funds were limited.

Students were learning to be cooks and bakers early in the program. At the same time other students were learning to be nurses, draftsmen, carpenters, plumbers, electricians, cement finishers, masons, painters, tile setters, roofers and floor specialists. These were the first occupational programs designed by the school personnel with the aid of the advisory committees. However, at the outset it became apparent that many students could benefit by educational programs housed in existing high school facilities and tribal buildings. Courses were offered to help Navajo youth become occupationally skilled in clerical work.

Many adult employees had an opportunity, for the first time in their lives, to go to school at night to up-grade their skills. Many typists took shorthand to qualify as secretaries. Clerks improved typing skills to qualify for higher ratings. Many adults studied bookkeeping so that they could perform their jobs better and also qualify for better jobs. The director of the data processing center was glad to offer instruction so that more people could be trained to man the positions in the center. The school records were processed in the data processing center. The student government funds were controlled by computers. Even the student bank had access to the data processing equipment to keep individual student accounts. Each student had his own bank account and learned to handle money.

At the outset of operation both students and community members asked about competitive athletic programs. The executive dean worked with the Navajo Advisory Committee to determine the effect such a program would have on the growth and development of the college. Costs were studied. The nature of proposed educational programs would have required that some students reside in extension centers and would not have ready access to campus life. The decision was made to develop strong intramural activities during the first five years and not try to compete in an interscholastic athletic program. The limited resources available were needed to develop the communities and the people.

At the beginning of the second year of operation an agriculture program was established. This program was to serve two purposes. It was to produce some of the foodstuff for students living in dormitories, and was to serve as a training program for students who wished to pursue agriculture as a life vocation. With the development of the 110,000 acres of irrigable land in the San Juan basin, by the United States Bureau of Reclamation, it was desirable to teach young farmers how to farm and make the soil yield its fruits. The equivalent of one section of agricultural land was set aside for a school farm. This was located close to the campus. In addition to the agriculture program on campus, an on-the-job agriculture program was sponsored by San Juan Community College. With the assistance of specialists from New Mexico State University, Navajo adults were trained to make the soil produce enough so that the farmer was able to pay into tribal funds for use of the newly developed land.

The school farm became so successful that a variety of crops were grown. Vegetables were in abundance, fresh for the table and in over-supply. This prompted the promotion of a cannery to preserve surplus vegetables for use in off seasons. Fruit trees were planted and began to yield. Apple trees did as well as any in the United States. Enough apples, peaches, apricots, carrots, beans and tomatoes were canned to provide foodstuff for dormitories. As the years went by, the needs became greater. The Tribal Council made more land available for school farms so that produce was grown for the increasing numbers of students.

The livestock industry was an important part of this early agricultural program. The dairy herd produced milk and milk products for dormitory dining rooms. The Tribal Council purchased beef animals, hogs, sheep and goats to be raised. A poultry enterprise was started. This latter enterprise provided sufficient eggs and poultry for the dining rooms. The livestock was processed in a small slaughter house and processin plant. Hides were sold and bones were used as fertilizer. The spirit of rodeo competition made this animal husbandry an interesting venture. Along with the work and learning went the fun.

The college adopted an open door policy. It admitted all high school graduates, Navajos and non-Navajos, as well as others over 18 years of age who demonstrated that they could profit from a program. Students whose achievement was equal to or better than the average of high school graduates in the United States were encouraged to plan for a full four-year college or university program. Some went directly to such institutions upon high school graduation; others attended the community college and pursued a college transfer program. Some who ranked considerably below the average were given opportunities to eliminate deficiencies through use of teaching machines in the study center. High school courses were available on machines so that students could acquire knowledge and skills that might make it possible for them to succeed upon transfer. Students with severe deficiencies were not permitted to take transfer courses until they met the achievement levels that permitted success in courses pursued. Tests clearly indicated that the Navajo students had mental abilities equal to that of white students. However, achievement tests clearly indicated that more than 80 per cent were deficient in acquired knowledge. Students demonstrated an unusual ability to coordinate eye and manipulative muscles. The women had already demonstrated this ability on the assembly lines of Fairchild Conductor Corporation at Shiprock, in assembling transistors and diodes.

Few Navajos had entered the stream of service occupations. Barbers were scarce or non-existent in all communities on the reservation. Some men traveled more than 100 miles twice each month to get haircuts. Others encouraged their wives to do the job. Programs were designed to train students for positions of barber, beauty operator, service station attendant, waitress, sales clerk, cash register operator and radio repairman. Some positions were so limited that the college cooperated with the Bureau of Indian Affairs in selecting and sending students to cities away from the reservation for training. One such position was that of watch repairman.

Because roads were needed in many parts of the reservation, a program of training men to operate road building equipment was begun utilizing on-the-job experience. Schools on wheels were developed to accomplish this community development program.

The beautiful scenery found on the reservation was almost unknown to the American tourist in 1965. Motels had been established in Kayenta, Chinle, Window Rock and Shiprock. The Tribal Council was just beginning to realize the value of the tourist dollar to the economy of the reservation. Students were trained to be cooks, bakers and hotel managers to assist in this phase of community development. Bringing the tourist to the reservation provided many new jobs for the Navajo. Most of these were in the service occupations. However, related services were to develop. Heretofore, the Navajo Police were the only helpers to stranded tourists. Automobile repair shops were almost non-existent. Service stations were few and far between. The tourists wanted to have films developed within 24 hours and wanted to try again the next day to capture some picture that had been missed. The tourist wanted to learn about Navajo legend and history. Special outdoor stages in natural amphitheatres were developed early and summer programs were given around campfires. Students in drama classes were instrumental in writing script for such presentations and were the actors during the summer months. This provided employment and assisted greatly in attracting tourists to the reservation. Special guided tours required the employment of bus drivers and guides. These programs provided the tourist with the things that he wanted to spend his money to see. It also provided an income of outside dollars to bolster the economy of the reservation.

Almost all Navajo housing was substandard by national norms. This called for the development of housing projects in several communities on the reservation. To accomplish this task it was necessary to provide schools on wheels. Students in the construction trades built trailer houses to serve as schools. One trailer was used as a classroom, library and study center. Another was equipped with a kitchen and dining room. Another with shop and tool storage. Others were used to house the families of the teachers and as dormitories for the students. In each community some students lived at home and worked on construction as they learned the building trades in trailer schools.

Advanced placement and credit by examination were early innovations of the college. Students who demonstrated proficiency in any subject area offered were given credit. Students were able to spend time with teaching machines to acquire knowledge and skills that permitted them to qualify by proficiency examinations. The audio-visual work was very successful and most courses offered in the college were video taped and placed in the study center. Students who missed a class could check out a tape and get the value of the day's lesson. Students who did not understand the lesson checked out tapes and were able to learn important things that they missed during the regular class session. Courses on video tape that were needed by only a small number of students were purchased and made available in cooperation with the director of the study center.

An important part of the instructional program was the work experience which was required of almost all students. Students were given opportunities to work for wages and were required to deposit earnings in the school bank. The school bank operated just like any bank except that checks were cashable only on campus. Students were required to learn to manage their time and money. Students who were unwilling to conform to standards were dismissed and space was made available to another student who had the desire. Exacting standards were established in all training programs. To have required less of students would have put the trained Navajo at a severe disadvantage in competing with other people off the reservation.

The spirit of the school was such that the student government was given a great deal of responsibility in establishing codes of conduct. Civil government procedures were effected so that the students were learning by experience. Student elections were spirited and some were as hotly contested as seats on the Tribal

Council. Time was allocated for the performance of student body duties and office space was specifically designed to carry out the function of government on the campus. Students elected to important positions were required to take a course in government and the operation of their office was the training ground. However, during the course they also learned about tribal, city, state and federal government activities. The school newspaper served as the training ground for those interested in all phases of journalism. It also provided the opportunity for students to exercise the freedom of a responsible press.

IV. STUDENTS

Most of the students were Navajo. However, many white students whose parents were employed on the reservation were in attendance. Some Hopi Indian students attended this college because it was reasonably close to their homes. Some out-of-state students were admitted on a regular tuition basis. This provided an opportunity for the Navajo to learn about people from other parts of the country and other parts of the world.

Few Navajo students came from homes that had sufficient income to provide a college education for members of the family. The federal government's work study program was made available to almost all the students. In this study program the student worked fifteen hours each week and earned $18.75 per week. This was enough money for him to pay for his board and room. He was expected to earn enough in the summer months to pay for books, clothing, and incidental expenses. The Tribal Council made work opportunities available for this purpose.

Many of the jobs filled by students under the work-study program related closely to the operation of the school. Some of the students served as readers for instructors, others as part-time secretaries and clerks, still others as part-time custodians. Others were used as teacher aides in the neighboring schools, both public and BIA. Whenever possible, the work experience was directly related to the student's future occupation. Jobs provided the opportunity to earn and learn.

The spirit of the students was good. Living quarters for the young men and women were small, accommodating only eight boys and eight girls. The small dormitories had three wings, one for girls, one for boys, and the third for a kitchen and living quarters for the house parents. The lobby served as a living room-dining room combination. The kitchen was separated from the lobby by a counter. Girls prepared food in accordance with instructions by the campus nutritionist. These instructions came over closed circuit television. Boys and girls were required to rotate cleaning assignments in their respective wings. The living experience was to be as home-like as possible and was a vital part of the total educational program.

V. FINANCE AND BUILDINGS

Finance and buildings were so inseparable that a single discussion of both will serve the purpose. The parent junior college district found it difficult to secure enough money for all building needs. However, with students earning money from federally sponsored work-study programs, it was possible for some of the Tribal Scholarship money to be used for buildings and operational costs. A small amount of money was made available the first year, with increasing amounts in the years that followed. The Tribal Scholarship Committee continued to sponsor and pay the way for talented students to attend four-year institutions. The first year of operation saw only a slight decrease in the number of scholarship grants because the Navajo Community College could not provide for many students.

Campus buildings were not available. Use was made of other tribal buildings to get school started. Food service was arranged with another establishment in the community. The first building projects were several dormitory units, enough to accommodate 320 students. Tribal equipment, money and materials (lumber in particular) were used to keep construction costs down. The tribal development and design department provided the architectural work and the first building technology teachers provided the supervision for students during the construction program. This was to be repeated time and time again in the years that followed.

The parent institution made an application to a private foundation to secure funds for the executive dean's salary and for the salary of his secretary. A grant was secured for the first three years of operation. Included in the grant were sufficient funds to bring some of the best talent in America to the reservation to provide counsel during the development. Federal grants were requested under provision established by federal law and some federal funds were made available, particularly for the vocational shop buildings. Surplus materials and equipment were acquired to reduce the cost of initial investments. Much of the shop equipment was obtained by this procedure. Other federal funds were made available to develop the guidance resources and to equip some of the necessary laboratories.

Some tribal funds were invested in dormitories. Rental receipts repaid the principal sum along with a fair interest for the use of the funds. This was one method used by the tribe to invest in capital goods and receive a dual return; money in the form of interest and education for members of the tribe.

The parent institution counted the attendance of students who were taking programs for credit and received state aid for each full-time student equivalent. In addition, the parent district charged tuition for students who were not residents of the parent county and this was used to help defray costs of instruction and operation. Ownership of some buildings on the campus remained with the tribe. However, the responsibility for determining how they were to be used remained with the parent district although they sought the advice of the Tribal Education Committee. In order to maintain proper accounting of expenditures a rental system was devised so that the parent institution paid a nominal rental fee for use of buildings. This then became a part of the operational cost in determining the true cost of the institution.

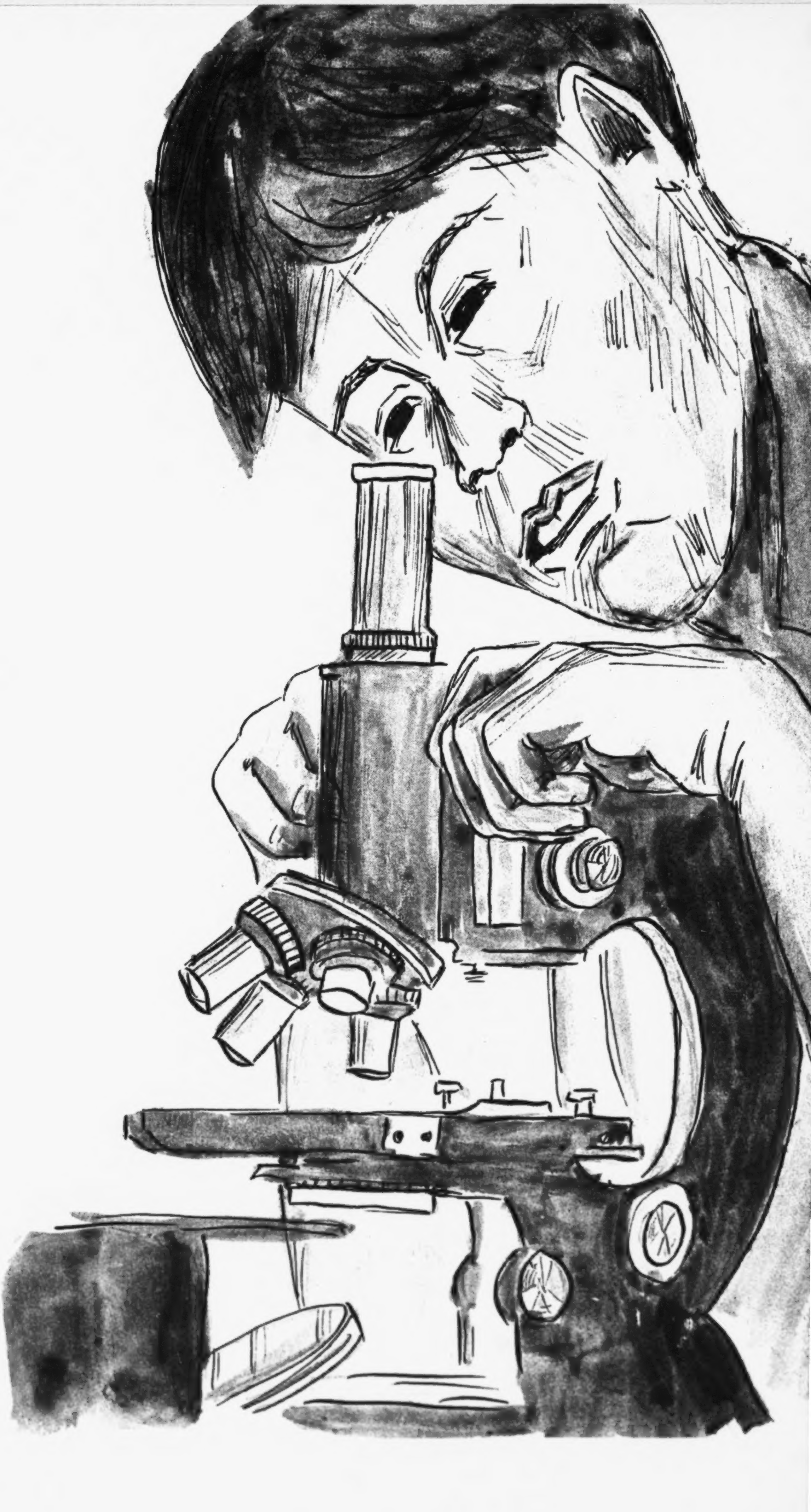
By means of a lease-purchase agreement, the district acquired ownership of the buildings.

Part of the $400,000 income from the investment of the tribe's permanent school fund was diverted for use in building construction, part was used for operational costs, and the balance was used to send students to school away from the reservation. Those attending the community college were expected to pay their own expenses.

By 1969 the Tribal Scholarship Committee ceased sending students away for vocational and technical training. It was in that year that the Bureau of Indian Affairs had sufficient funds to provide that type of education for all qualified Navajos. Thus, more money became available for use on the local college. The Scholarship Committee continued sending students away from the reservation to pursue four-year and graduate programs leading to the professions and engineering. As the years passed, the number who were sent away for the first two years of work beyond high school dwindled. This was due in part to the more realistic goals that the Navajo acquired and due in part to the interest that the Navajo student had in Navajo Community College.

VI. CONCLUSION

The foregoing description of the growth and development of Navajo Community College, although fictitious, suggests the nature of the survey team's recommendations as they relate to the purpose of the college and the philosophy of the instructional program that is needed. The chapters that follow provide factual material from which these recommendations arise. As these chapters are read, the type of community college that has been described should be kept in mind. Such a college can be obtained but it must come from the interest and efforts of the Navajos. No one from the outside can come onto the reservation and impose such an institution; it must grow from an idea into reality through the efforts of the Navajos. The chapters that follow present basic information that is needed for guidance in the development of a community college for the reservation. Such a college is possible, and the survey team thinks that it is needed.



CHAPTER II

SCHOOLS FOR THE NAVAJO

The Navajo people actively support formal education at all levels. Although in an earlier age they avoided and resisted schooling with every means at their disposal, the Navajo now believe education provides the principal avenue of advancement for the tribe.

Increasing numbers of Navajo youth are graduating from elementary and high school, and attending college. Although there is evidence of improving academic performance by Navajo students, language and reading difficulty and cultural differences remain barriers to effective education. These handicaps, coupled with the added problem of adjusting to an alien campus life, have taken a withering toll of Navajo students in off-Reservation colleges and universities.

The Navajo leadership has expressed interest for some time in establishing a community college on the reservation. General interest among the people is indicated by a survey conducted among students now attending colleges off the reservation, by high school graduates not presently in school and by parents of high school graduates.

Projections of probable enrollments, based on the present and future number of high school graduates, clearly indicates the need for a community college.

I. HISTORY OF EDUCATION

Prior to signing of the Treaty of 1868 and the establishment of the Navajo Indian Reservation, the United States made no provision for the education of the Navajo people (Information in this section, Young, pp.7-28).

Under the Treaty of 1868, Navajo parents were to be "induced or compeled" to send their children to school. Resistance of the Navajos made this initialattempt ineffectual and, in 1869, a new policy was inaugurated. Under this policy,religious and educational work among Indians was allotted to religious denominations. In 1870, the care of the Navajo Tribe in Arizona and New Mexico was accepted by the Presbyterian Board of Missions. A school was established in an existing building at Ft. Defiance, but attendance was scanty.

A boarding school was started at Ft. Defiance in 1880 by the Bureau of Indian Affairs, but, by 1884, the school had not been successful in enticing many parents to send their children, nor for the children to remain once they had been enrolled. In October of 1884, 22 pupils were in attendance. The number increased to 33 by January of 1885.

A few years later, in 1887, the school attendance of Indian children was made compulsory, and thereafter it became the custom to use police to locate children and place them in school. Frequently, parents hid their children from the police, or voluntarily sent only the sickly and weak, retaining the strong at home.

Despite continuing resistance of the Navajos toward formal schooling, during the first decade of the 1900s schools were constructed at Tuba City, Leupp, Tohatchi, Shiprock, and Chinle; and during the following decade at Crownpoint, Toadlena and Fort Wingate.

The Meriam Report of 1928 described the eight boarding schools and nine day schools, with facilities for 2,865 students. The operation at that time was considered decrepit and the report recommended expansion of the day school system rather than the boarding school program.

With de-emphasis of the boarding school system, 50 new day schools were built during the 1930s on the reservation, adding 3,500 new spaces. Designed to permit children to live at home and commute by bus, the new school system faced difficulty because of the absence of the necessary road system. With the outbreak of World War II, the continuance of bus service became impossible.

By the 1940s there was a growing awareness of the need for formal schooling by the Navajo people, and during the war period temporary, make-shift dormitory operations, built in some localities by Navajo parents themselves, converted the day schools to a boarding basis and kept the reservation school system alive.

Public attention was focused on the need for greater emphasis on Navajo education by the report of a 1946-47 study. The report indicated that 66 per cent of the Navajos had no education whatsoever and the median number of school years was less than one - compared with a median of 5.7 years for the United States Indian population generally and 8.4 for the total population.

The Long Range Act of 1950 authorized $25,000,000 for school construction. Included was provision to construct dormitories in locations bordering the reservation so that Navajo students might attend public schools. The federal government was expected to contribute proportionate classroom space and to pay per capita operating costs to the co-operating school districts.

The Long Range Act was expected to provide facilities for only 55 per cent of the existing school population. It was believed at that time that the reservation area could support only one-half of the 70,000 Navajos, and that population shifts would reduce the school facility needs.

Emigration from the reservation has never appealed to the Navajo people and the population today is nearly 107,000. Consequently, school construction has not met the growing need. An estimated 80 per cent of elementary-secondary age-children were in schools on and off the reservation in 1964-65.

II. THE NAVAJO SCHOOL SYSTEM

The school system serving the Navajo Tribe is a highly varied and far-flung operation. It includes mission schools, public schools and facilities operated by the Bureau of Indian Affairs. The latter include day schools, trailer schools, boarding schools on and off the reservation, and bordertown and reservation dormitory operations (Information in this section unless otherwise indicated, Young, pp. 33-35).

Bureau of Indian Affairs Operations

The Bureau operates 50 boarding schools, 11 day schools and 8 trailer schools. The Bureau also operates one reservation dormitory. This dormitory is not connected with a specific school, but serves children who attend classes at local or nearby public schools. (Dept. of Health, Education, and Welfare, Navajo Tribe).

Off-reservation dormitories are maintained at seven towns bordering the reservation to accommodate Navajo students who attend the public schools there. Two additional dormitories are planned for bordertowns where sizeable numbers of Navajo students presently attend school. The off-reservation dormitory facilities were originally designed to accommodate only high school students, but lack of facilities on the reservation has necessitated accommodating the first through twelfth grades in the peripheral towns.

Thirteen off-reservation boarding schools, located at sites ranging from Oklahoma to California, serve Navajo and other Indian students.

Public Schools

During the late 1940s, the Navajo Tribe demanded that federal schools be replaced with local public schools on the premise that the two systems differed essentially in their objectives, curricula and teaching methods. Public Law 815 funds, in the amount of $1,000 per student, became available for construction of such schools. The first public school constructed under this law was at Ft. Defiance, Arizona. More than 20 public schools districts now have installations serving children on the reservation.

Mission Schools

The conduct of Indian education was almost entirely in the hands of the missions from 1869 to 1897. In the last years, however, Congress established a policy that thereafter the government would not subsidize the operation of sectarian schools serving Indian groups.

The largest of 21 mission schools serving the Navajo students on and off the reservation are located at Farmington and Rehoboth in New Mexico, and Ganado and St. Michaels in Arizona. They enroll approximately 50 per cent of the Navajo students attending mission schools (Branch of Education, Window Rock, Arizona, April 15, 1965).

III. ATTENDANCE IN VARIOUS TYPES OF SCHOOLS

Table I shows the number of pupils attending the various types of schools during the years 1959-60 through 1964-65 (Statistics for fiscal 1960-64, BIA Branch of Education, April 15, 1965). Several factors are evident in examining the table. First the total number of Navajo pupils attending school has increased from approximately 29,000 to almost 40,000 over the six-year period. This is an increase of 38 per cent. Second, the number of Navajo pupils, 6 to 18 years of age, attending public schools has increased from 10,137 to 16,393, or 61.7 per cent. During the same period the number attending boarding and day schools of the BIA increased from 16,003 to 19,706, or 23 per cent. Although the number attending mission schools was relatively small in 1959-60 (1,267) it maintained about the same (1,292) in 1964-65 after dropping from a high of 1,505 in 1963-64. The approximate annual student increases are 10 per cent in public schools, 6 per cent in BIA schools, 2 per cent in mission schools, and 6 per cent for the totals in all categories. These data are shown graphically in Figure 2.

Total population figures for Navajos are difficult to determine. One difficulty is the fact that many babies born to families in their living units are not reported for periods of time extending into years. It is also understood that the names of deceased individuals are sometimes not removed from census rolls. Keeping in mind the difficulties encountered in establishing an exact census count, the best census figure for Navajos living on the reservation in November, 1964, was 106,773 (Melvin Wise, research analyst).

TABLE I

SCHOOL CENSUS REPORT OF INDIAN CHILDREN

1960 - 1965

School Year	Boarding	Federal Day	Schools Total	Public	Mission	Total in School 6 to 18	Under 6 and Over 18 in School	Total in School	Not in School
1959-60	14,797	1,206	16,003	10,137	1,267	27,407	1,643	29,050	4,335
1960-61	15,409	1,472	16,881	10,564	1,379	28,824	1,826	30,650	5,779
1961-62	14,896	1,851	16,747	12,808	1,470	31,025	2,406	33,431	6,209
1962-63	14,984	1,988	16,972	13,577	1,404	31,953	3,512	35,465	7,617
1963-64	18,249	1,720	19,969	14,172	1,505	35,646	2,471	38,117	5,611
1964-65	18,132	1,574	19,706	16,393	1,292	37,394	2,600*	39,994*	5,000*

*Estimates

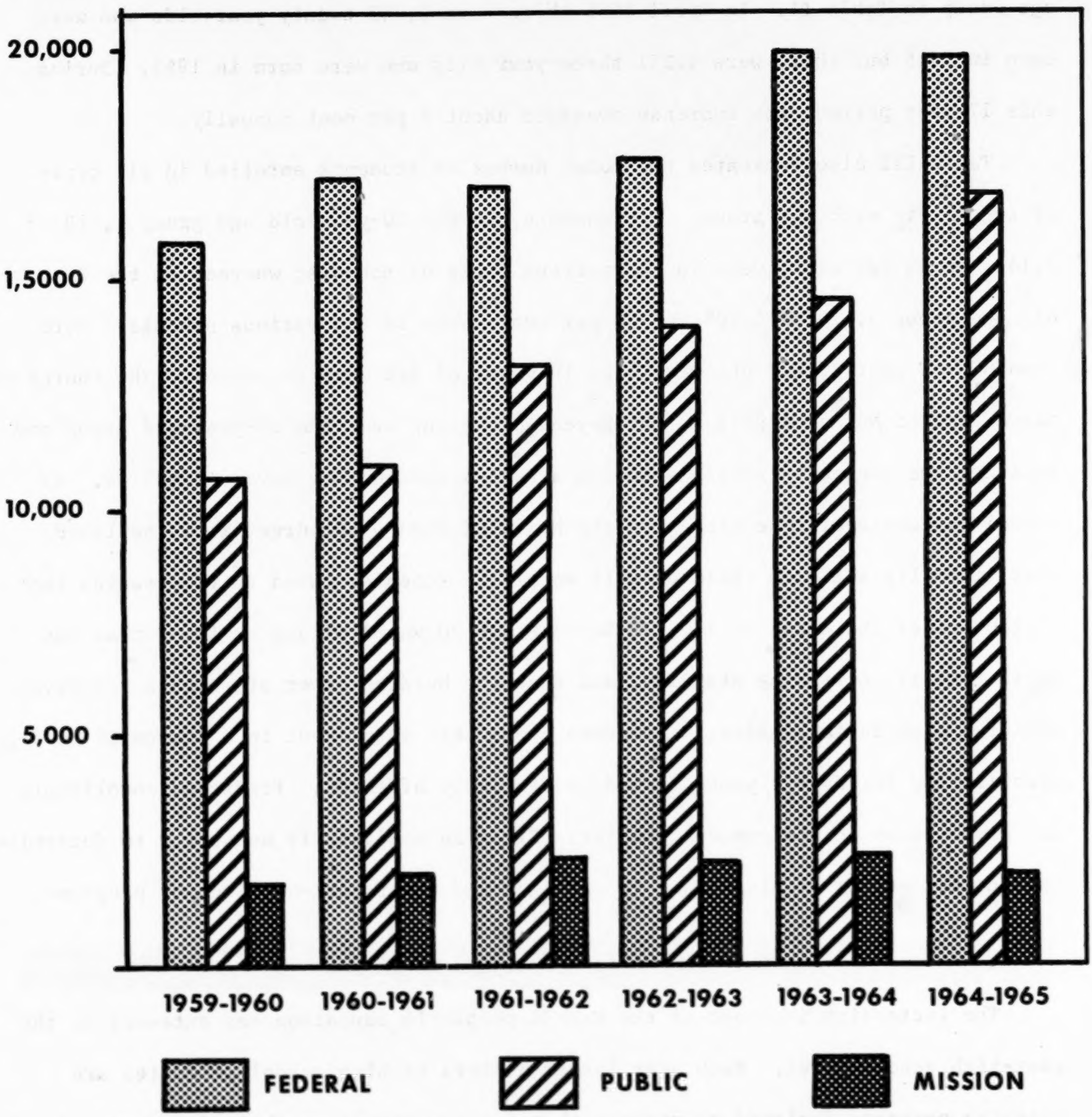


Fig.2 Navajo Pupils Educated in Federal, Public, and Mission Schools, 1959-1965

There is an evident increase in births over deaths as shown in the total in each age group in Table II. In April 1965 there were 2,142 twenty-year-olds who were born in 1945 but there were 4,251 three-year-olds who were born in 1962. During this 17-year period, the increase averaged about 3 per cent annually.

Table III also indicates the total number of students enrolled in all types of schools in each age group. For example, in the 20-year-old age group 1,118 of 2,142, or 52 per cent, were in the various types of schools; whereas in the 9-year-old age group 3,520 of 4,108, or 86 per cent, were in the various schools. More than 80 per cent of all children 8 to 16 years of age were in school. The increased percentage of Navajo pupils in the 9-year-old group over the 20-year-old group may indicate the change in attitude toward school attendance by Navajo families. As schools become available closer to the homes of Navajo children, it is believed that virtually all such children will enroll in schools. When it is observed that 71,260 out of the total of 106,773 Navajos are 20 years of age or less, that the birth rate is increasing steadily, and that the holding power of schools for Navajo children also is increasing, it becomes clear that enrollment in a community college specifically for Navajo youth should be similarly affected. Predicted enrollments are given later in the present chapter. First an analysis is necessary to determine the current extent of attendance in colleges and other post-high school programs.

IV. THE NAVAJO IN HIGHER EDUCATION

The increasing interest of the Navajo people in education has extended to the post-high school level. Each year larger numbers of high school graduates are entering programs designed to prepare them for vocational, technical and professional careers. The low economic status of most Navajo families has necessitated financial assistance for Navajo students. Although the amount of such aid has increased significantly in recent years, it is still insufficient to provide assistance for all those wishing to obtain additional training.

DISTRIBUTION OF PUPILS TO MISSION, PUBLIC AND FEDERAL SCHOOLS*

Birth Year	Age	Grand Total	Number Enrolled									Out of School	
			Total	Mission	Res. Dorm Bdtn. & Public	Federal Schools				Higher Edu.	Spec. Edu.	Out of School	Unknown
						Federal Total	Day	Res. Brdg.	Off-Res. Brdg.				
64	1	3,357										3,357	
63	2	3,963										3,963	
62	3	4,251										4,251	
61	4	4,349										4,349	
60	5	4,098	6	6								4,092	
59	6	4,010	240	27	92	120	35	85			1	3,770	
58	7	4,068	3,095	73	1,154	1,868	377	1,491				850	123
57	8	3,972	3,334	80	1,309	1,937	325	1,612			8	553	85
56	9	4,108	3,520	79	1,392	2,043	273	1,770			6	491	97
55	10	4,108	3,484	110	1,440	1,925	219	1,702	4		9	496	128
54	11	3,938	3,300	119	1,444	1,726	122	1,600	4		11	524	114
53	12	3,716	3,088	108	1,384	1,594	118	1,451	25		2	489	139
52	13	3,587	2,944	109	1,401	1,428	51	1,323	54		6	512	131
51	14	3,216	2,653	107	1,278	1,258	38	1,005	215		10	431	132
50	15	3,231	2,634	115	1,320	1,193	11	694	488		6	496	101
49	16	3,297	2,617	108	1,308	1,196	4	407	785		5	556	124
48	17	2,706	2,053	84	958	1,003		171	832	1	7	573	80
47	18	2,665	1,918	85	860	966	1	123	842	3	4	672	75
46	19	2,478	1,593	56	620	880		68	812	30	7	781	104
45	20	2,142	1,118	26	433	569		28	541	86	4	920	104
Totals		71,260	37,597	1,292	16,393	19,706	1,574	13,530	4,602	120	86	32,126	1,537

*April, 1965 Branch of Education, Window Rock, Arizona (tentative report)

Navajo Tribal Scholarships

The Navajo Tribe established its first scholarship program in 1954. The initial appropriation for this purpose was $30,000. The scholarship fund was increased in subsequent years and amounted to $180,000 in 1957. That year the Navajo Tribal Council established a $5,000,000 scholarship fund stipulating that the annual income therefrom would provide scholarships for Navajo students. The fund was increased to $10,000,000 in 1959 and now provides an annual income of approximately $400,000 (McGrath and Others, p. 48).

Since 1954, the Navajo Scholarship Program has provided aid for 3,222 college and post-high school students. (See Table III). Approximately 12 per cent of this number have graduated. The guidance and counseling officer of the Navajo Tribal Scholarship program attributes the enormous drop-out rate primarily to weakness in English and mathematics (Smith, pp. 49-50). Homesickness and social adjustment add to the problem.

In 1965, there were 41 graduates with bachelors degrees. Over half, 3, of these majored in education. An additional 40 students completed two-year technical and vocational or secretarial and commercial programs (Navajo Tribal Scholarships Committee office).

Bureau of Indian Affairs Grants

In addition to Tribal Council Scholarships, there are BIA grants, which are fewer in number, but which greatly increase the number of eligible high school graduates who can go to college. Scholarships during 1964-65 totaled 91 and the amount of financial aid was $45,523. Of the 91, 44 were first-year students, 18 were second-year students, 21 were third, 7 were fourth and 1 was a graduate student. Of these BIA grants, 39 were distributed to graduates of public schools, 33 to graduates of Bureau schools and 19 to mission school graduates.

It is impossible to confidently predict the number of students who would remain to complete a full two-year program if a junior college were on the reservation. It

TABLE III

TRIBAL COUNCIL SCHOLARSHIPS GRANTED*

1953 - 1965

Year	Funds Available	Number of Grants
1953-54	$ 30,000	35
1954-55	65,000	83
1955-56	100,000	108
1956-57	115,000	109
1957-58	180,000	200
1958-59	400,000	179
1959-60	400,000	219
1960-61	400,000	361
1961-62	400,000	322
1962-63	400,000	316
1963-64	400,000	204
1964-65	400,000	536
1965-66	400,000	550

*Data From Tribal Council Scholarship Committee is obvious, however, that the factor of homesickness, which enters in markedly in colleges at great distances, would virtually be eliminated. The adjustment factor to a different societal group would not exist. A relatively large portion of academically average, or above average students would, in all likelihood, complete two years of college work. Many other less able students would be expected to complete short term courses of one year or less.

Interest in Navajo Community College

The service provided by a Navajo Community College can be measured tentatively by ascertaining the attitude of three groups: (1) Navajo students attending off-reservation colleges, (2) Navajo high school graduates who are not enrolled in any college, (3) and Navajo parents of high school graduates. Several questions pertinent to each of these groups were formulated and responses were collected. They came from students attending approximately 80 colleges throughout the nation and from a representative sample of each of the other two groups from the five subagencies throughout the reservation. Arrangements were made to have either the dean of students or one of the Navajo students on each college campus collect the information from that group. The non-college high school graduates and the parents of high school graduates on the reservation were interviewed by a Navajo survey assistant.

Navajo College Students. Responses from 281 students in 56 colleges were tabulated. These students are graduates from 68 high schools in eight states (New Mexico, Arizona, Colorado, Utah, Oklahoma, California, Nevada and Oregon). These students are following 48 different programs of studies, but about 25 per cent are preparing to teach. About 30 per cent of the students responding indicated that they are attending the present school because it offered the program they wanted. Another 30 percent credited either a counselor or a teacher for the choice of institutions. An equal number credited their families and friends, and about 10 per cent said the school attended was less expensive than others for the program desired.

Students were asked, "Would you have considered attending a junior college near the Navajo reservation upon high school graduation had there been one?" Fift- three per cent of respondents indicated "Yes" and 45 per cent "No". Two per ent were undecided. They were nearly all desirous of helping the Navajo people ater college: 94 per cent reacting in this manner.

A number of reasons were suggested why Navajo college students drop out f college before completing their intended programs. Ranked in order of frequcy, college students offered these reasons: (1) lack of effort, (2) inadequate ademic preparation, (3) problems concerning alcohol, (4) desire to return to family nd friends, (5) lack of sufficient funds, (6) marriage, (7) not socially accepte on campus, (8) lack of adjustment to college life, and (9) unsympathetic instruors. A list of 20 other reasons were mentioned from one to four times by the studts.

High School Graduates Not in College. In the analysis of high school gduates who are not now in college, a number of significant factors were noted. One hird of the students interviewed were married. More than half the graduates had eered college at some time after their high school graduation, but only one-fourth f those entering completed the program which they started. Another one-fifth opped out for financial reasons according to the respondents. Marriage, illness, litary

out for financial reasons according to the respondents. Marriage, illness, military

service, and several other miscellaneous reasons were given by the remaining half of those who entered upon, but failed to complete, their college programs.

The high school graduates who did not enter a college offered several reasons. Lack of finances led the reasons given by 75 per cent of those not entering college. Twenty-three per cent started working. In some cases they intended to enter college later, but they did not do so. Of the remaining 18 per cent, 8 per cent married and 10 per cent felt inadequate academically to pursue college work.

Most of the high school graduates (91 per cent) felt they needed more education or training for their desired vocation. Nearly as large a portion (84 per cent) indicated that they plan to secure further educational training. It is interesting to note that 81 per cent of the graduates interviewed said they would have considered attending a junior college on the reservation, if one had been available.

Parents of High School Graduates. Only parents, having one or more children who graduated from high school, were included in the sample interviewed regarding attitudes toward college attendance. Of the total interviewed, 32 per cent had one child who graduated from high school; 26 per cent had two children who finished high school; 21 per cent, three graduates; 17 per cent, four graduates; and 4 per cent, five or more graduates.

Parents interviewed actually had a large number of children who had attended college. Of the total children of all parents interviewed, 65 per cent had attended college at one time. Moreover, the parents were unanimous in their expressed desire that their children should go to college. If a junior college had existed on the Navajo reservation, 94 per cent of the parents would have preferred that their children should attend it. Reasons given included the fact that it would have been less expensive; it would have been "closer to home"; the children would have been more likely to keep the Indian culture and traditions of the reservation; and they would be less likely to forget the Navajo language if they were on the reservation.

The 9 per cent who preferred that their children attend college away from the

The 9 per cent who preferred that their children attend college away from the

reservation gave the following reasons: (1) "Need to get away from the reservation so they can learn to speak better English", (2) "Children should get away from the reservation so they can observe how the rest of the world lives", and (3) "Children would get better education in four-year college".

Navajo High School Seniors Increasing

Increases in number of Indian pupils attending schools are evident, regardless of the way census and enrollment data are grouped.

Table IV shows pupil population totals in 10 public school systems on and near the reservation. The percentage of increase in totals each year using 1960-61 as a base was: 1961-62, 8.3 per cent increase; 1962-63, 20.9 per cent increase; 1963-64, 30.9 per cent increase; and 1964-65, 49.3 per cent increase.

TABLE IV

AVERAGE DAILY ATTENDANCE OF INDIAN PUPILS IN SELECTED PUBLIC SCHOOL DISTRICTS

1960-61 To 1964-65

	1960-61	1961-62	1962-63	1963-64	1964-65
Arizona*					
Chinle	647	760	851	1,002	1,182
Ganado	541	690	806	829	832
Window Rock	1,133	1,246	1,320	1,375	1,411
Sanders	228	222	279	254	321
Tuba City	648	720	792	860	948
Kayenta	217	328	394	464	503
New Mexico**					
Bloomfield	180	173	180	214	221
Farmington	59	70	78	79	64
Gallup-McKinley	2,327	2,266	2,485	2,694	2,839
Grants	494	534	635	704	741
Totals	6,474	7,009	7,830	8,475	9,662
Per cent of Base Year, 1960-61	100%	108.3	120.9	130.9	149.3

*Indian Education in Arizona, Annual Report, 1960-61 to 1964-65, Dept. of Public Instruction, Phoenix, Arizona

**Annual Reports to the Bureau of Indian Affairs, 1960-61 to 1964-65, New Mexico Department of Education, Santa Fe, New Mexico

Tables V and VI show increases in numbers of seniors in BIA peripheral dormitories and the number of Indian pupils graduating from selected public high schools, respectively. Examination of totals in these Tables for 1959-60 and 1964-65 again show increases amounting to 152 per cent.

V. FACTORS IN PREDICTING COMMUNITY COLLEGE ENROLLMENTS

In order to approach the problem of predicting possible enrollment for a community college it is necessary, not only to note increases in the numbers of Navajos attending and graduating from high schools, but also to examine the distribution of these graduates throughout the reservation. Equally important is the factor of availability of already established colleges and training programs which potential community college students may attend.

Many Navajos have attended college and training programs throughout the U.S. and it would be anticipated that some would continue to prefer to go away to school. This may be due to the nature of curriculum desired, to the fact that brothers or sisters attended other institutions with pleasure or to other reasons.

Due to the geographic size of the reservation, students on the extremities or off the reservation may be closer to another college or training institution. It is assumed that regardless of the location of the Navajo Community Campus, more than one-third of the total number of students who could be called "potential enrollees" in the Navajo Community College would attend elsewhere. The survey team assumes, therefore, that only 60 per cent of those who pursue post-high school work will attend the proposed Navajo Community College.

Tables VII and VIII were developed to help planners determine the approximate location of students. It is apparent that there were about one-third again as many in Arizona as in New Mexico. This is because Arizona has almost twice as many pupils in federal schools as there are in New Mexico. Utah has relatively few Navajo children in any of the types of schools.

TABLE V

HIGH SCHOOL SENIORS IN BIA PERIPHERAL DORMITORIES

1960 - 1965

Dormitory	1959-60	1960-61	1961-62	1962-63	1963-64	1964-65
Albuquerque	0	0	8	8	4	17
Aztec	0	9	15	10	4	9
Flagstaff	7	3	9	6	12	17
Gallup	19	25	34	60	76	115
Holbrook	17	17	19	19	28	23
Richfield	-	15	14	10	8	6
Snowflake	3	13	17	12	10	12
Winslow	15	11	13	18	15	16
Totals	61	93	129	143	157	215

Data furnished by respective school districts.

TABLE VI

INDIAN PUPILS WHO GRADUATED FROM SELECTED PUBLIC HIGH SCHOOLS ON OR NEAR RESERVATION

1961-62 To 1964-65

	1961-62	1962-63	1963-64	1964-65
Arizona*				
Chinle	7	30	27	38
Ganado	0	2	21	17
Kayenta	4	5	13	11
Sanders	5	4	11	12
Tuba City	27	23	18	27
Window Rock	48	43	53	78
New Mexico**				
Bloomfield	2	2	1	3
Farmington	1	2	3	6
Gallup-McKinley	55	95	113	183
Grants	24	33	57	61
Totals	173	239	317	436
Per cent of 1961-62 as Base Year	100.0	138.2	182.3	252.0

*Indian Education in Arizona, Annual Report, 1960-61 to 1964-65, Dept. of Public Instruction, Phoenix, Arizona

**Annual Reports to the Bureau of Indian Affairs, 1960-61 to 1964-65, New Mexico Dept. of Education Santa Fe, New Mexico

TABLE VII

ANNUAL SCHOOL CENSUS OF NAVAJO CHILDREN IN GALLUP AREA

1960 - 1965

	6 to 18 Years of Age			Under 6 and Over 18 Years	Total in School
	Public Schools	Federal Schools	Mission and Others		
1960 Totals - - -	10,137	16,003	1,267	1,643	29,005
Arizona	4,580	9,213	533	946	15,272
New Mexico	5,224	6,492	719	675	13,110
Utah	333	298	15	22	668
1961 Totals - - -	10,564	16,881	1,379	1,826	30,650
Arizona	4,975	10,273	953	1,047	17,248
New Mexico	5,252	6,328	418	753	12,751
Utah	997	280	8	26	651
1962 Totals - - -	12,808	16,747	1,470	2,406	33,431
Arizona	5,853	9,962	753	1,294	17,862
New Mexico	6,594	6,566	709	1,055	14,924
Utah	361	219	8	57	645
1963 Totals - - -	13,577	16,972	1,404	3,512	35,465
Arizona	6,504	10,140	729	1,990	19,363
New Mexico	6,972	6,265	673	1,474	15,384
Utah	101	567	2	48	718
1964 Totals - - -	14,172	19,969	1,505	2,471	38,117
Arizona	6,296	12,610	704	1,507	21,117
New Mexico	7,635	6,777	777	904	16,093
Utah	241	582	24	60	907
1965 Totals - - -	16,393	19,706	1,292	2,600*	39,994*
Arizona	8,873	11,671	494		
New Mexico	7,385	8,035	798		
Utah	135				

* Estimates

Data from Statistics Concerning Indian Education. Fiscal Years 1960-65

TABLE VIII

DISTRIBUTION OF 1965 SCHOOL CENSUS IN SUBAGENCIES OF GALLUP AREA

Subagency	Public	Federal	Mission	Higher and Special Education	Totals
Chinle	1,718	3,672	110	26	5,526
Crown Point	4,717	3,863	467	29	9,076
Ft. Defiance	5,210	4,031	317	53	9,611
Shiprock	2,671	4,172	331	76	7,250
Tuba City	2,077	3,968	67	22	6,134
Totals	16,393	19,706	1,292	206	37,597

Data from Branch of Education, Window Rock, Arizona, April 15, 1965

The distribution of pupils in the five subagencies of the reservation is shown in Table VIII. The Ft. Defiance Agency has the greatest number with Crownpoint having the second largest number; Shiprock, Tuba City and Chinle follow in that order.

The number of Navajo students who may attend the new community college will be affected further by increases or decreases in percentages of high school graduates in relation to the maximum possible graduates. The maximum possible is the number of youths in a given year who are the age of normal high school graduates. The number who actually graduate and who become eligible to enter college are those remaining after dropouts have occurred throughout the elementary and secondary grades.

Projected Enrollments in Navajo Community College

Projected enrollments for the proposed Navajo Community College are shown in Table IX. These are anticipated enrollments after the various factors discussed in the previous sections and others have been taken into consideration. One of these factors is the annual number of high school graduates, as shown in Figure 3. It should be stressed also that these projections can be anticipated only if a complete college program is initiated when the institution begins. If only selected programs are initially offered, it is apparent that only small groups of students within the total possible number could be served and, therefore, total enrollment would be reduced proportionally.

If all phases of the instructional program of the college are in operation when it opens in September 1968, the opening enrollment should approximate 450 students. These would form the first class representing only freshmen. It should be anticipated that some of these students would not return for a second year. A part of these may choose to go to other colleges, while others will terminate formal educational training. Some students will withdraw for other reasons. The projection formula assumes that only one-half of the first class will become sophomores, but constant increases in the percentage of freshmen groups should occur in succeeding years. The formula also assumes that a larger percentage of graduating seniors will

TABLE IX

PROJECTED ENROLLMENTS IN NAVAJO COMMUNITY COLLEGE

1967 - 1980

Birth Year	Total Births	High School Graduates		Navajo Community College	
		Year	Number	Year	Enrollment
1949	3,297	1967	1,429	1967-68	
1950	3,231	1968	1,497	1968-69	449
1951	3,216	1969	1,608	1969-70	683
1952	3,587	1970	1,913	1970-71	831
1953	3,716	1971	2,093	1971-72	976
1954	3,938	1972	2,363	1972-73	1042
1955	4,108	1973	2,602	1973-74	1231
1956	4,108	1974	2,738	1974-75	1392
1957	3,972	1975	2,780	1975-76	1466
1958	4,068	1976	2,848	1976-77	1533
1959	4,010	1977	2,807	1977-78	1569
1960	4,098	1978	2,869	1978-79	1620
1961	4,349	1979	3,044	1979-80	1716
1962	4,251	1980	2,976	1980-81	1715

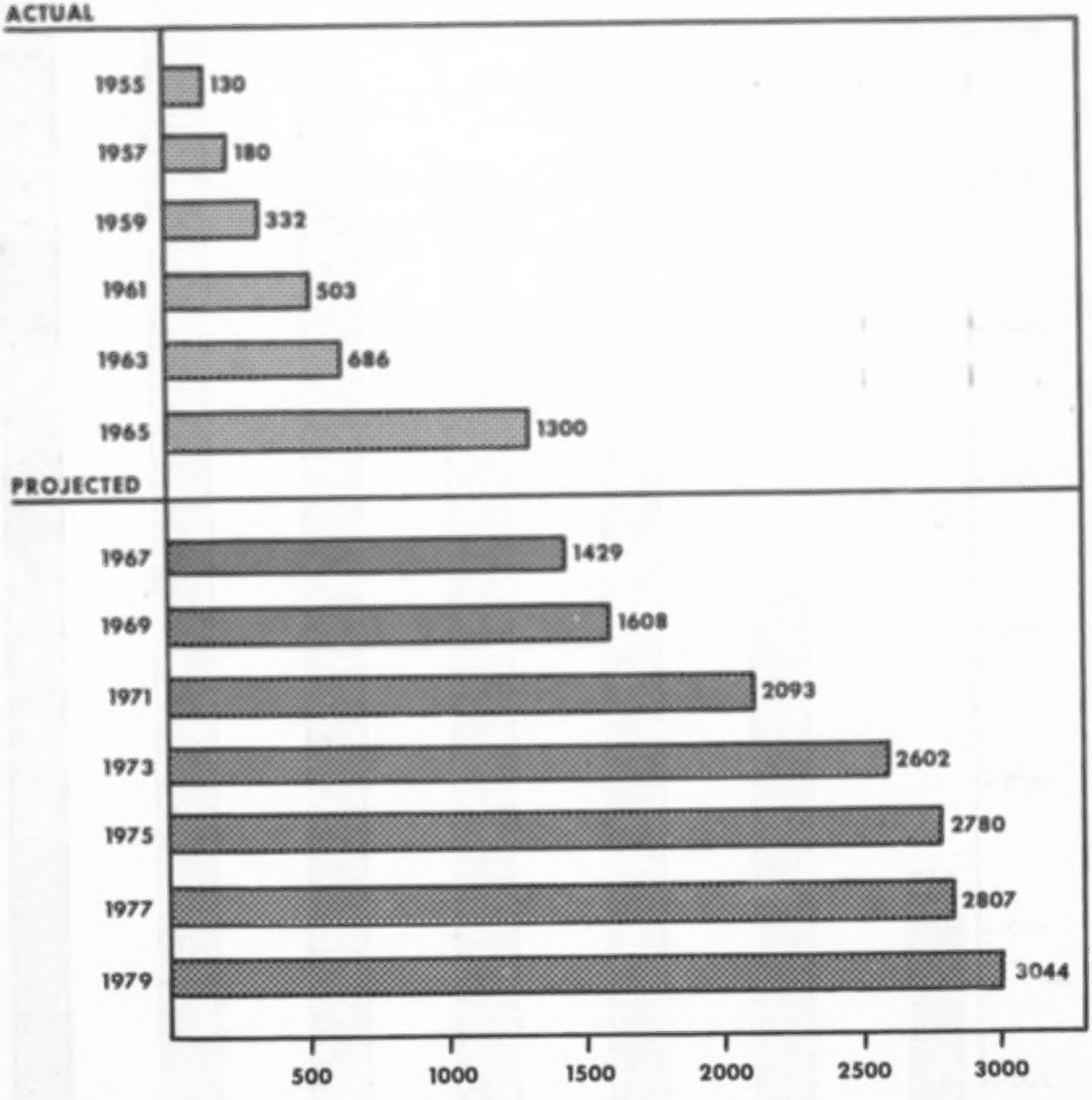


Fig.3 Navajo High School Graduates and Projected Graduates, 1955-1980

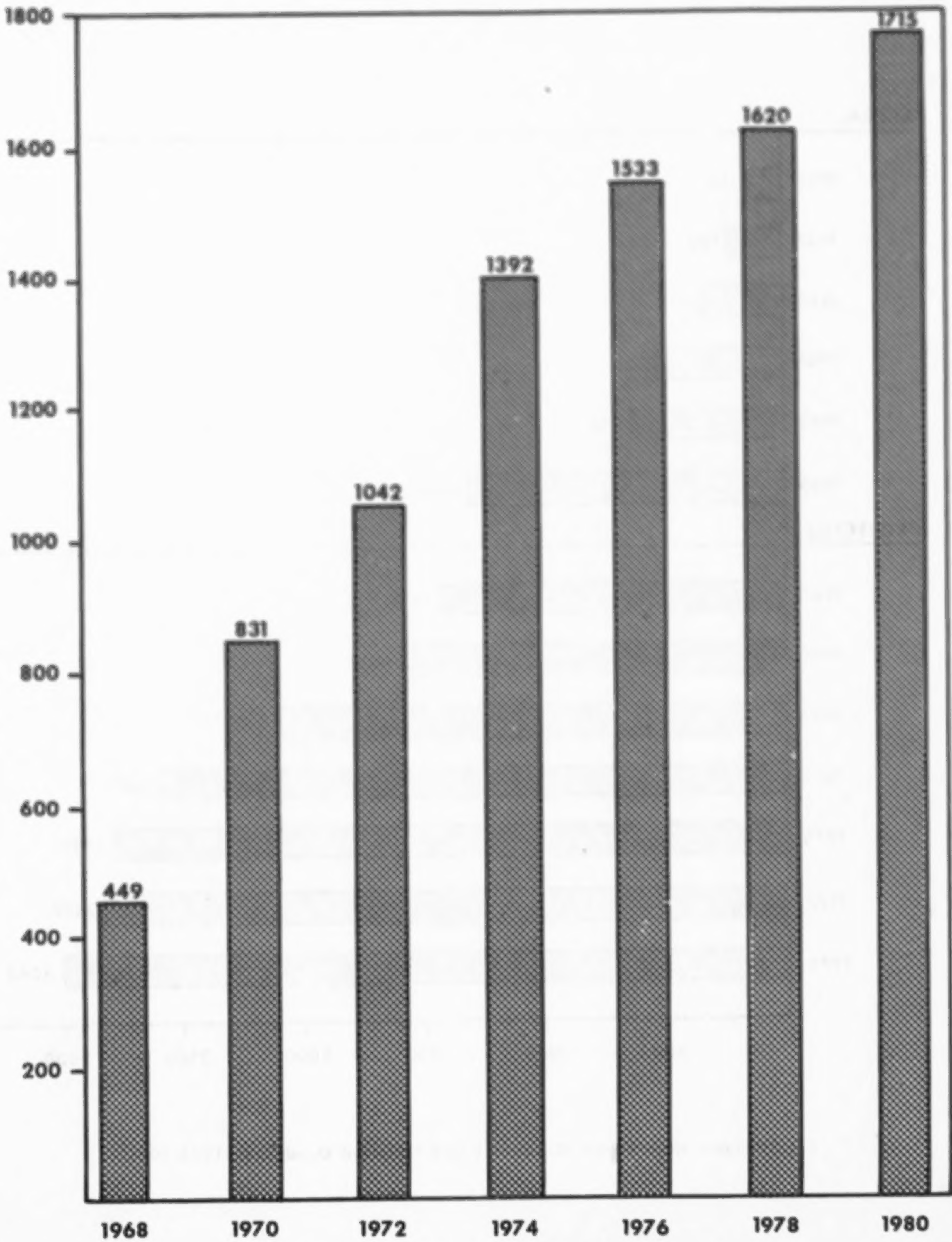
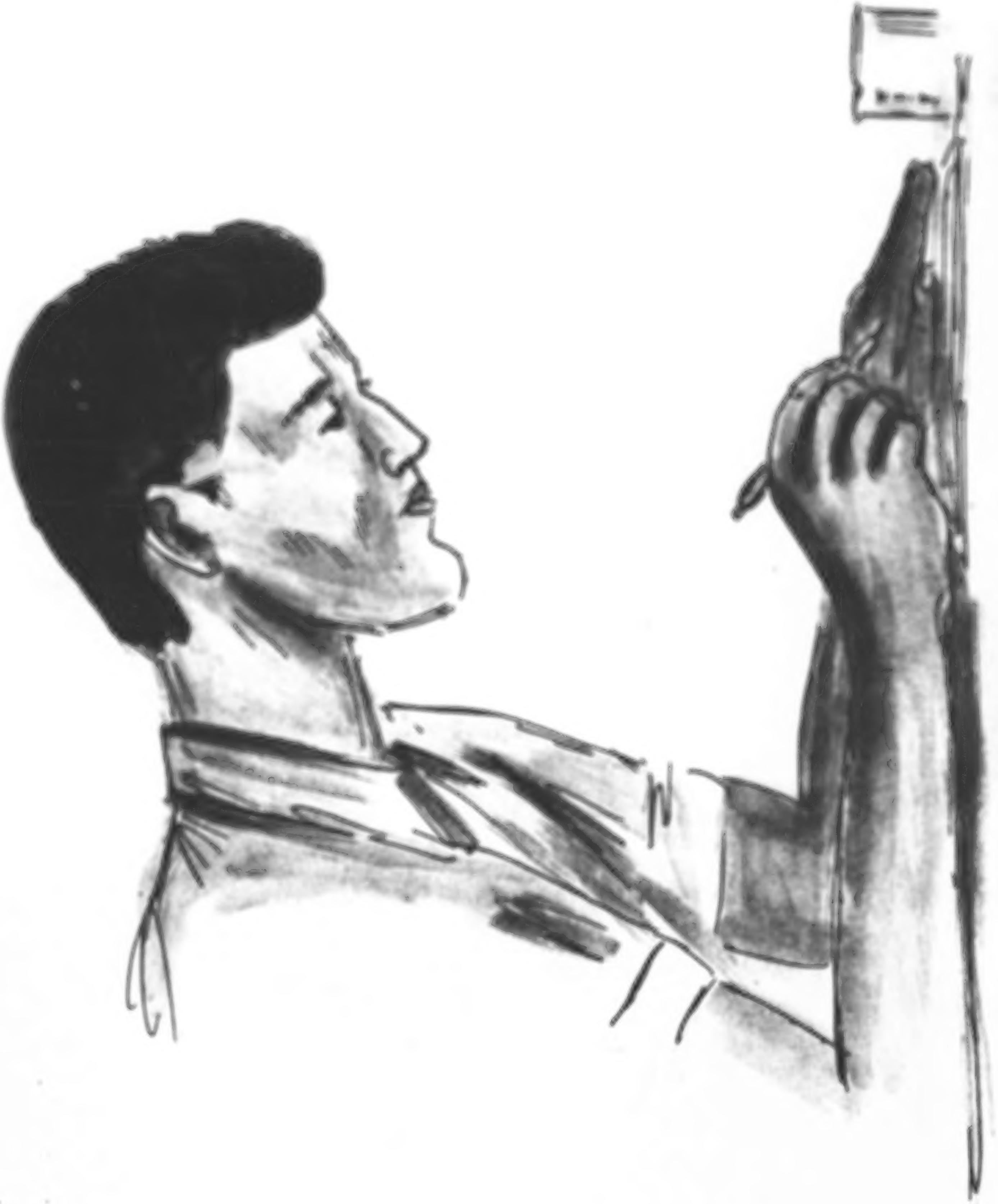


Fig. 4 Projected Enrollment in Navajo Community College

enroll from year to year during the first 10 years.

Table IX also shows the projected number of full-time students for any given year through 1980, and figure 4 shows the same growth pattern at two-year intervals. These totals in the judgment of the survey team represent the most defensible figures which they can develop. If experience through the years ahead furnish enrollment figures which vary from these, it is believed that they will reveal the projections to be conservative. If differences occur, this variance is the more desirable. It is preferable to expand facilities after experience than to over build and find an undue amount of unused space and facilities.

If the Navajo Community College enrolls approximately 1500 students in 1975, it will be large enough for an economical operation, but not too large for exhibiting a friendly and personal atmosphere between faculty and students. The college will develop an adult vocational program which will add many to the total enrollment. No projections are furnished on the adult program because this phase of the community college program will need to develop after the initiation of the regular program for high school graduates. However, by 1975, it would be anticipated that the adult short term training programs could involve from 700 to 900 additional part-time enrollees.



CHAPTER III

OCCUPATIONAL OPPORTUNITIES

Unemployment and underemployment have remained severe problems for the Navajo people. Although the tribal government and the Bureau of Indian Affairs have been successful in efforts to increase job opportunities through a variety of employment programs, the number of jobs available has failed to reduce the unemployment rate significantly because of the increasing number of Navajos entering the labor force annually.

This chapter contains a presentation of the major sources of employment available to the Navajo. Included are the tribal enterprises, private industrial developments, self-employment, and the training and placement of Navajos off the reservation.

Included also are national employment trends and the relationship of employment and education.

I. EMPLOYMENT ON THE RESERVATION

Tribal Forest Products Industry

As of January, 1960, the Navajo forests represented 2,030,000 board feet of merchantable timber, located on a 458,457 acre area comprising the Defiance and Chuska-Tsaile units of the Navajo Work Circle. The timber is reserved for the tribal industry. Remaining forested areas are scattered and not generally accessible for commercial purposes (Information in this section, Young, pp. 178-184).

Reservation timber land is under the protection and management of the Navajo Agency Branch of Forestry. The management program is jointly financed by the federal government and the Navajo Tribe. The branch currently has 13 regular and 14 seasonal fire control employees.

Large-scale development of the Navajo lumber industry began in 1946 after expansion of the mill located at Sawmill, bringing the annual cut to more than 12,000,000 board feet. Continued expansion brought the annual production range to between 17,000,000 and 20,000,000 board feet of dressed lumber.

Approximately 300 Navajo workers are employed in the woods and mill operations. During the 1950's the payroll was $675,000 per year, while the average annual value of lumber sold from 1950-60 has been over $1,000,000.

Subsequent surveys of the Navajo timber resources indicated that the total annual production of lumber could exceed 50,000,000 board feet.

As a result, the tribal council agreed to finance a new sawmill operation at Navajo, New Mexico, appropriating $7,500,000 for the first phase of development. The Navajo Forest Products Industries was organized to manage the lumber industry.

About 400 workers are employed in the new woods and mill operations, bringing the total employment in the industry to about 550. The annual payroll for the lumber industry is about $1,700,000.

Tribal Utilities Authority

In January, 1959, the tribal council approved an arrangement whereby electricity would be purchased by the tribe from the town of Farmington for distribution through a tribal utility system. Tribal funds in the amount of $450,000 were appropriated to construct necessary transmission lines from Farmington to serve customers in the Shiprock area, and service through the tribally owned system begun in the fall of 1960.

Extensive development of the water and sewer systems has taken place in the past five years. The management, maintenance, and operation of these systems has been placed under the Tribal Utility Authority.

Domestic water systems now exist in practically all Navajo communities through the joint efforts of the Navajo Tribe and the BIA.

Community sewer systems are designed to accommodate much larger populations than now exist. For example, Tuba City with a population of 1,500 has a sewer system that will provide for a population of 3,000. Large sewer systems now serve Tuba City, Kayenta, Chinle, Window Rock, Ft. Defiance, Shiprock and Tohatchi. Smaller systems serve Navajo, Lukachukai and Leupp. A sewer system is proposed for Ganado. Aerial surveys are now being made for 20 additional systems which may be developed in the near future.

In February, 1961, the tribe appropriated $390,000 for the installation of natural gas lines to serve the Window Rock-Ft. Defiance-Navajo area. Gas lines have now been extended to other parts of the reservation.

Volunteer fire departments exist in the larger communities and one or two have paid employees (conversation with BIA officials).

Navajo Irrigation Projects

At the time of the Krug Report in 1948 there were 78 small irrigated tracts on the Navajo Reservation comprising 23,000 acres and capable of supporting 400 families on a subsistence basis. The Krug Report estimated a potential of 58,859 acres to be capable of development exclusive of the Navajo-San Juan Project mentioned below. Of this potential acreage, 41,986 acres were described as having an assured water supply and would provide a livelihood for about 800 families (assuming assignments ranged from 40 to 60 acres per family). During the 1950's, 5,134 acres of new farmland were placed under irrigation on the reservation, primarily in the Shiprock area. The additional acreage is to be developed in future years (Information in this section, Young, pp. 120-133).

In 1958, the Navajo Tribe agreed to assume the cost of operating and maintaining all irrigation systems on the reservation. The tribe appropriated over $221,000 for this purpose in 1960. The cost was formerly borne by the federal government.

The Navajo-San Juan Irrigation Project, scheduled for completion in 1970, will enable development of 110,630 acres of farm land in the South San Juan Division. The project will provide an estimated 1,120 families with irrigated farms and would create employment for an additional 2,240 families.

Water Development and Maintenance

The unequal distribution of surface water on the reservation caused part of the potential grazing land to lie idle while other reservation sections were overgrazed. Development of water resources accelerated during the 1930's, slacked off during the war years, and was begun again in earnest during the decade of the 1950's.

Originally financed entirely by federal funds, development and maintenance of water resources has been increasingly assumed by the Navajo Tribe. The total burden was taken over by the tribe in 1959. The following year a total of $1,157,700 was appropriated for construction and maintenance of water development. The projects included 694 drilled wells, 548 dug wells and 895 springs in 1960 (Young, pp. 172-178).

Tourist Industry

One of the newer and potentially lucrative industries which the Navajo Tribe is beginning to exploit is recreation and tourism. A Tribal Parks Commission was established in 1957 to operate the Tribal Park System.

The first tribal park was established at Monument Valley and during the first year was visited by 22,114 persons who paid $4,092 in admissions and $7,855 for arts and crafts products. In May, 1965, an 80-room modern motel, "Monument Valley Inn", was opened at Kayenta (Smith, p. 92). Under lease arrangements, the Navajo Tribe receives 7 per cent of gross receipts from room rentals and 1½ per cent of restaurant and other retail sales. In 1965, 25 Navajos were employed by the inn in various capacities. During 1964, leases were negotiated for construction of the Window Rock Shopping Center Complex and of a new 34-unit motel and coffee shop at Window Rock (conversation with motel employees).

The Tribe owns and operates two motel and restaurant combinations, one at Window Rock and the other at Shiprock. These developments provide job opportunities for Navajos in business management and operation.

Other parks have been established. Camping and picnic facilities have been developed and tourist maps and brochures printed. As improved roads make the reservation more accessible, tourism can be expected to become an important source of jobs and income. Surveys indicate that one and one-half million automobiles will travel State Reservation Route 1 annually. With the opening of Lake Powell, the possibilities for developing recreation facilities by the Navajo Tribe became enormous (Smith, p. 92).

Tribal Government

Local government units of the Navajo Tribe are called chapters. Officers in the 96 active chapters consist of a president, vice president, secretary, and grazing committeeman who are elected for four-year terms in open chapter meetings. Paid on a per diem basis, the officers are charged with the duties of hearing and deciding family and property disputes, allotting homesites and grazing permits and carrying out miscellaneous duties (Information in this section unless otherwise indicated, Young, pp. 400-417, 597-606).

The legislative branch of the government consists of a Navajo Tribal Council composed of 74 delegates nominated by local community conventions conducted by the chapters, and elected for four-year terms. Delegates are paid $5,297 per year and receive an additional $18 per diem for each day the Council is in session.

Executive officers of the tribe are the chairman, vice chairman, executive secretary and a number of aides. Approximately 45 individuals head the various departments and sections within the executive office, public services, natural resources and business divisions of the executive branch of the Navajo Tribe.

Law enforcement on the reservation has been primarily a tribal function since 1959. In 1965, there were a total of 202 officers and administrative personnel.

Seven judges, including a chief justice, preside over courts on the reservation.

A policy of the tribe is to hire Navajos to fill all tribal positions for which they qualify. At the present time, a large number of non-Indian professionals are employed.

The total tribal budget for 1964 was $28,828,092. As of the end of 1965, there were approximately 1,100 full time and 300 part time individuals employed by the Navajo Tribe in all employment classifications (Tribal official).

Federal Government Employment

Although the Navajo Tribe is gradually assuming greater control over the affairs of the Navajo people, the presence of the federal government is still extensive (Information in this section, Young, pp. 597-604).

In addition to large-scale school operations already discussed, the Bureau of Indian Affairs remains responsible for various Navajo affairs either in whole or in part.

The bureau maintains the offices of the general superintendent and his staff, plus administrative offices for education, special services, Navajo relocation, social work, realty, roads, forestry, land, operations and credit.

In addition, superintendents, administrative officers and staff for comparable duties are stationed at each of the five subagencies.

Soil Conservation Service. Important to the present and future economy of the Navajos is the soil conservation program sponsored originally by the federal government but with increasing participation by the tribe. The program involves protection against erosion and soil deterioration, restoration of eroded and depleted area, stabilization of runoff and sediment production land areas, improvement of cover for crops, forest, pasture, and range, retention of water for farm and ranch use and water management. Between 1930 and 1960, soil conservation practices resulted in reclaiming and preserving close to 5,000,000 acres through control of brush and dunes, dam and pond construction, land levelling and tree planting. Technicians estimated in 1956 that the soil conservation program would take 20 years for completion at a cost of $70,000,000 (Young, pp. 172-177).

Road and Trail Construction. Prior to 1950 there were few all-weather roads on the reservation. The Long Range Act of that year provided for $20,000,000 to construct roads. An additional $20,000,000 was authorized in 1957. These authorizations followed the Krug Report which pointed out that "a road construction program is fundamental to the rehabilitation of the Navajo Reservation. An adequate road system is a pre-requisite to the development and conservation of Navajo resources, to the education of Navajo children, and to the improvement of Navajo health. The minimum road construction considered necessary consists of 636 miles of primary roads and 633 miles of secondary roads."

Routes 1 and 3 were given preference after the development of industrial activity in the Four Corners area. Upon completion they will be maintained by the states in which they lie. By the close of fiscal 1961, there were on the reservation, 291 miles of bituminous surfaced highway and 360 miles of gravel surface, bringing the total to 651 miles (Young, pp. 133-143).

Public Health Service. Health and medical care of the Navajos has remained primarily the responsibility of the Public Health Service (Information in this section, Young, pp. 67-81).

Diseases which particularly afflict the Navajo people are tuberculosis, pneumonia, and diarrhea. One phase of the Long Range Rehabilitation Act was to attack the Navajo health problem. The health program for the Navajo is administered through the PHS division of the Indian Health Area Office in Albuquerque and the field office at Window Rock.

Five Public Health Service hospitals were in operation on or near the reservation in 1960, as well as three health centers. The staffs consisted of 672 employees in the following categories: 43 medical officers, 15 dentists, 122 professional nurses, 80 trained practical nurses, 88 nursing assistants, 3 dieticians and nutritionists, 3 medical social workers, 2 public health educators, 11 community health aides, 21 sanitarians, 8 pharmacists, 25 medical lab and x-ray technicians and 260 other employees. In addition, the Gallup PHS Hospital which opened in 1961, has a staff of over 200.

Individual Livelihood

Stockraising and small-scale farming have been the traditional Navajo methods of earning a living. As the population grew, flocks increased beyond the land capacity and the land resources deteriorated rapidly.

In the late thirties, the BIA attempted to force stock reduction in an effort to preserve the productivity of the land. The program aroused intense bitterness among the Navajo which persists to the present. A majority of families still live in poverty, dependent on small flocks and small farms.

The Navajo Tribe has changed its policy of allotting small parcels of farming land to families and of permitting division of land through heirship. Proposed allottment of land in the Navajo-San Juan Project will be in parcels of 120 acres or more to encourage the development of commercial agriculture.

The tribe has imported breeding bulls to improve the strain of cattle and good, healthy cattle can be seen in many sections of the reservation today.

Sheep raising remains the principal livestock operation. The 1964 livestock census lists 355,123 mature sheep, 22,165 lambs, 108,215 goats, 19,848 mature cattle and 19,189 mature horses (BIA Branch of Land Operations).

The reservation remains overgrazed and the Navajo have had to look for other sources of income and subsistence. Wage work, on and off the reservation, provides cash income for those able to obtain jobs. Navajos work on the reservation for the BIA and the tribe, and off the Reservation in unskilled labor jobs for the railroad, in neighboring towns, and as agricultural laborers in Arizona, New Mexico, and neighboring states.

Navajo rug weaving and silversmithing are famous for their excellence, and a few of the best known weavers and silversmiths can make a good living from their arts and crafts. For most, however, the sale of rugs and jewelry serves only to supplement a meager livelihood gained from a small flock of sheep or goats and a tiny garden patch.

Efforts to resettle Navajos off the reservation, either as individuals, families or colonies, have met with only mild success. Of 116 individuals settled on the Colorado River Irrigation Project from 1945 to 1951, only 44 (37.9%) were still there in 1960 (Young, p. 205). The BIA is presently providing vocational training and off-reservation placement services for 944 Navajo heads of families (fiscal year 1965). During the 1952-60 time period when this program first got underway, a total of 3,273 persons left the reservation for resettlement, including 555 families and 1,029 single persons. The rate of return to the reservation has been about 35 per cent (Peterson, p. 7).

Unemployment continues to plague the Navajo. Various estimates are made of the unemployment rate ranging from 60 to 85 per cent. The Stanford Research Institute in a Navajo Manpower study indicates that about 37 per cent of the Navajo labor force is unemployed and another 35 per cent underemployed (Peterson, p. 3).

Attraction of Investment Capital

The discovery of oil and gas on Reservation lands has enabled the Tribe to undertake a number of programs which would otherwise have been impossible. The income from gas and oil leases has been used primarily for long-range plans and capital expenditures, which the Tribal Council hopes will eventually improve the job opportunities and standard of living of the people. Annual income from the oil and gas leases has declined from the 1957 peak of $34.8 million to $15.4 million in 1965. Income from minerals other than gas and oil was over $1 million in 1965 (BIA Realty Office).

The Tribe, in conjunction with the BIA, has made strenuous efforts to attract industry to the Reservation. Since 1960 the Tribe has put over $10 million into developing utilities on the Reservation, both for present and future industrialization as well as raising the standard of living of the people.

Inducements for industry to locate on the Reservation include: long-term land leases (99 years by special act of Congress), water rights, a large labor pool plus funds for training programs, availability of electricity and gas, and the availability of Tribal funds to invest in the construction of industrial buildings.

A tribal economic development policy concerning private capital investment was adopted March 3, 1965. In 1965, existing non-Tribal industries on the reservation included: Transwestern Pipeline and El Paso Natural Gas Company main lines and pumping stations; Arizona Public Service Company coal generation plant (furnished coal for power by Utah Mining and Construction Company), various strip mines, and several uranium processing plants. The Fairchild Conductor Company at Shiprock employs 172 people. They are adding from 15 to 25 new employees each month until they reach an anticipated 800 (conversation with BIA officials).

The Kaiser Aluminum Company is manufacturing road culvert pipes and the Peter R. Smith Concrete Products Company is presently constructing a concrete products plant. The Babyline Furniture Company proposed to expand its existing manufacturing plant which already employs 30 Navajos. During 1964, a lease was negotiated for the establishment of a plastics factory in the Tribal Industrial Park, east of Gallup. Negotiations are underway with the BVD Company for a large manufacturing plant (Report of the Tribal Chairman, Navajo Times, March 11, - March 18, 1965).

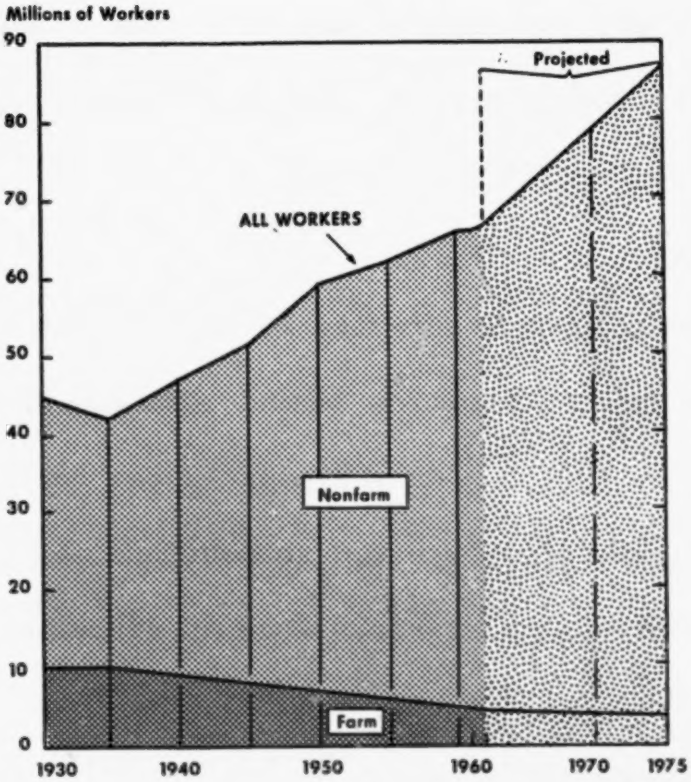
II. NATIONAL EMPLOYMENT TRENDS

The 1963-64 edition of the Occupational Outlook Handbook published by the U. S. Department of Labor projects trends in employment through 1975.

Figure 5 shows the change that has taken place in the number of farm and nonfarm workers from 1930 to 1962 and projects further change to 1975.

Today only one worker in 12 makes his living from farming, either as a farm owner or as a laborer. The implications of this fact are enormous. In 1870, the average farmer could supply food for only about 6 people; today, one farmer can meet the needs of 27 people.

From 10.3 million farm workers in 1930, the number has dropped by about one-half



(Occupational Outlook Handbook, Bureau of Labor Statistics, 1963-64)

Fig.5 More Workers in Business and Industry- Fewer on Farms

to 5.2 million in 1962. By 1975, the total will have dropped still further, to about 4 million, less than 4.5 per cent of the labor force.

Most workers are employed in industries other than farming; more than 90 per cent now earn their living in one of the following major types of activity: mining, manufacturing, construction, transportation and public utilities, trade, finance, service and government.

The growth within each of these eight groups was not uniform. Employment in transportation and public utilities, for example, hardly grew at all, despite the tremendous jump in air and bus travel. There are now only half as many jobs in mining as there were 40 years ago. On the other hand, the service industries, government employment, construction, and wholesale and retail trade grew very rapidly. Employment in government is now more than three times the employment in the early twenties and in the services almost three times as great. In both construction and wholesale and retail trade, employment has more than doubled. Employment in manufacturing, while continuing to expand, grew more slowly, increasing little more than one and one-half times since 1922.

The Industrial Forecast

Construction. Construction activity is expected to grow very rapidly as the increasing population and new families demand more homes and apartments. Employment may reach 4.4 million by 1975, an increase of 52 per cent over 1960.

Government. Employment is expected to continue its rapid rise, chiefly in state and local units providing services such as education, health, welfare, sanitation, and police and fire protection. By 1975, the total may reach nearly 13 million, an increase of 51 per cent in 15 years.

Another small but rapidly growing industry group is finance, insurance and real estate. Its growth reflects mainly the needs of our increasing city population and industrial activity. The number of workers may rise by 44 per cent from 1960 to 1975, reaching almost 4 million. Banking, as a part of the group, will grow especially fast; partly as a result of an increasing variety of financial activities and services and, by 1975, may account for two-fifths of the workers in this group.

The growth of population and rising incomes are expected to account for a substantial increase in wholesale and retail trade. This industry group employs more people than any other except manufacturing. Over the 1960-75 period, the number may increase by more than one-third, reaching beyond 15.5 million.

Manufacturing employment is expected to increase more slowly. By 1975, it may number over 20 million workers, or about one-fifth more than in 1960.

Employment in transportation, communications, and public utilities as a group is expected to grow rather slowly to about 4.5 million in 1975, only a half-million (13 per cent) more than in 1960.

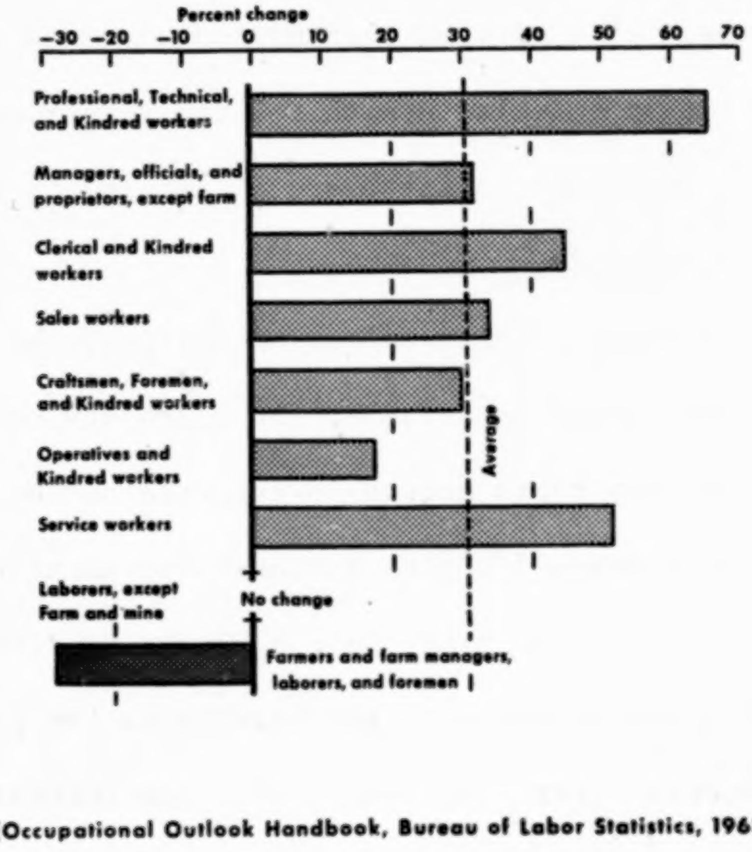
No growth is expected in the mining industry group as a whole, which has been declining, but employment is expected to remain at about the 1960 level in 1975.

Agricultural employment is expected to decline substantially, releasing thousands of workers to be absorbed elsewhere. Nevertheless, the professional and technical jobs connected with agriculture, such as those of agricultural research specialist, soil scientist, and soil conversationist, will actually grow.

Of particular significance to this survey is the fact that the changes mentioned will not be spread evenly throughout the country, but follow the pattern since World War II. Nationally, employment grew 27 per cent between 1947 and 1962, but in California, the Rocky Mountain States, the Southwest and Florida, employment growth doubled or more than doubled the national average. Aircraft and spacecraft, missiles, electronics and tourism account for much of this growth.

Occupational Change

Figure 6 projects the changes that are expected to take place between 1960 and 1975 in the major non-farm occupational groups. The chart indicates which occupations will grow faster than the expected average increase of 31 per cent for all employment.



(Occupational Outlook Handbook, Bureau of Labor Statistics, 1963-64)

Fig.6 Projected Percent Change in Employment of Workers in Major Occupational Groups, 1960-75

All of the growing occupations except the operators and kindred workers will exceed the average increase. In contrast with this, the number of laborers (excluding farm and mine) is not expected to increase at all, and the number of farmers, farm managers, foremen, and farm workers will continue to decline.

Occupational Opportunities in the Southwest

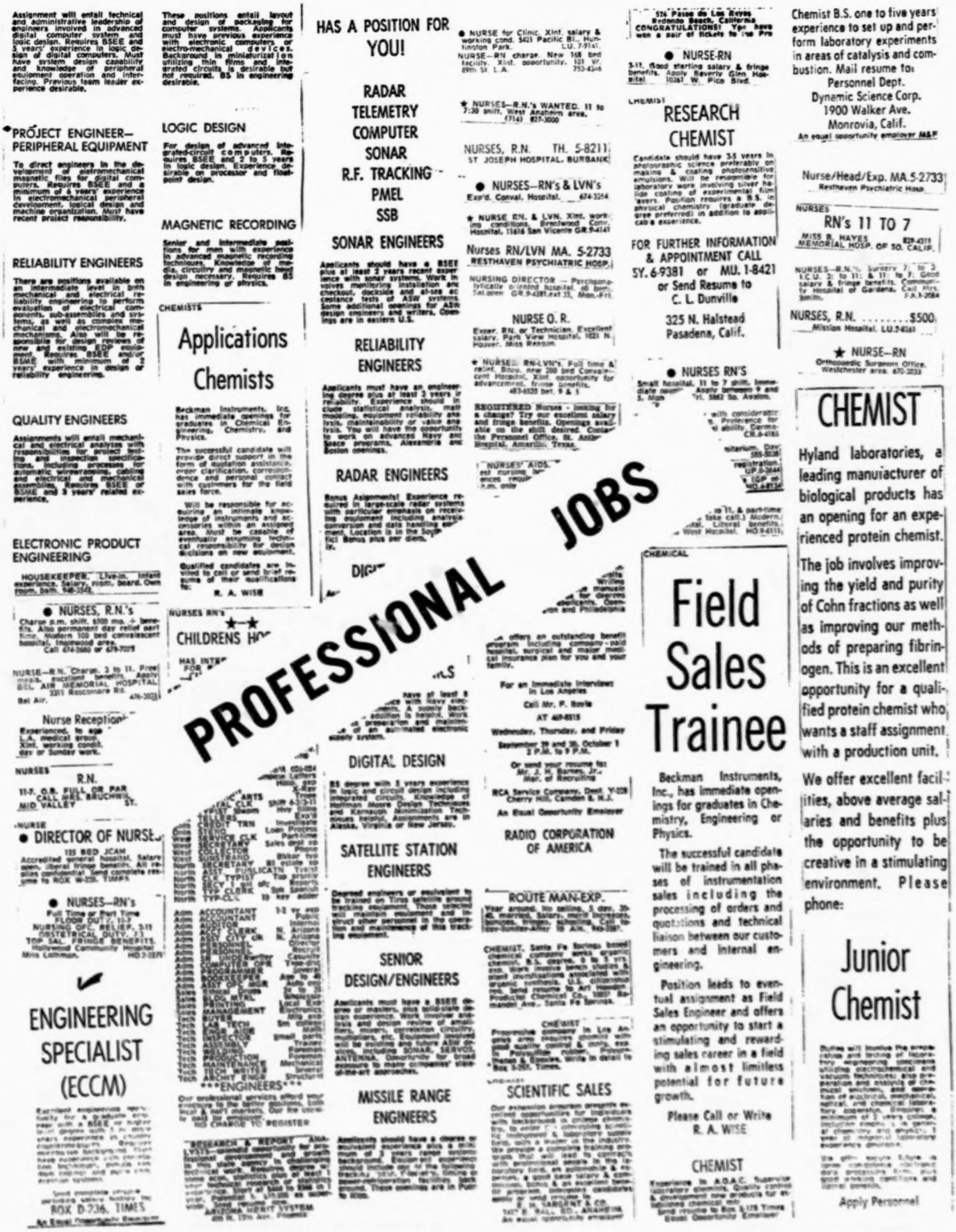
Figures 7 and 8 show reproductions of classified advertising found in newspapers published in Phoenix, Gallup, Albuquerque and Los Angeles. They indicate the current demand for the kinds of vocational-technical and professional personnel who might receive terminal or preparatory education in a community college program.

White-Collar Jobs

Rapid growth is expected in the white-collar group, especially among professional and technical workers. While the group as a whole may increase by about 45 per cent from 1960 to 1975, the professional and technical occupations may increase by as much as 65 per cent. Some professions will grow much faster than others. For example, engineers and scientists may roughly double their numbers by 1975, in meeting the needs of a growing economy and advances in electronics, jet aircraft, guided missiles, chemicals, health related research, and communications. Technicians, who assist these specialists, are increasing in number at least as fast as engineers and scientists.

Today's numerically largest white-collar occupation, the clerical workers (close to 10 million) have grown at a faster rate than any other except the professional groups. Relatively rapid growth is expected during the next 10 to 15 years. Moreover, use of highspeed office and business machines will create some new jobs requiring more skill than many clerical tasks of today.

The third largest group of white-collar workers is the proprietor-managerial group which in 1962 numbered over 7 million. With the increase of supermarkets and chain stores, the number of proprietors will remain relatively static. Salaried managerial positions, on the other hand, are increasing rapidly and will demand better



Assignment will entail technical and administrative leadership of engineers involved in advanced digital computer system and logic design. Requires BSEE and 5 years' experience in logic design of digital computers. Must have system design capability and knowledge of peripheral equipment operation and interfacing. Previous team leader experience desirable.

PROJECT ENGINEER—PERIPHERAL EQUIPMENT

To direct engineers in the development of electromechanical magnetic files for digital computers. Requires BSEE and a minimum of 6 years' experience in electromechanical peripheral development, logical design and machine organization. Must have recent project responsibility.

RELIABILITY ENGINEERS

There are positions available on an intermediate level in both mechanical and electrical reliability engineering to perform evaluation of electrical components, sub-assemblies and systems, as well as complex mechanical and electromechanical mechanisms. Also will be responsible for design reviews of new and existing EDP equipment. Requires BSEE and/or BSME with minimum of 2 years' experience in design of reliability engineering.

QUALITY ENGINEERS

Assignments will entail mechanical and electrical analyses with responsibilities for project testing and inspection specifications, including processes for automatic wirewrapping, cabling and electrical and mechanical assembling. Requires BSEE or BSME and 3 years' related experience.

ELECTRONIC PRODUCT ENGINEERING

HOUSEKEEPER. Live-in. Infant experience. Salary, room, board. Own room, bath.

● NURSES, R.N.'s

Charge p.m. shift. $500 mo. + benefits. Also permanent day relief part time. Modern 100 bed convalescent hospital, Inglewood area.
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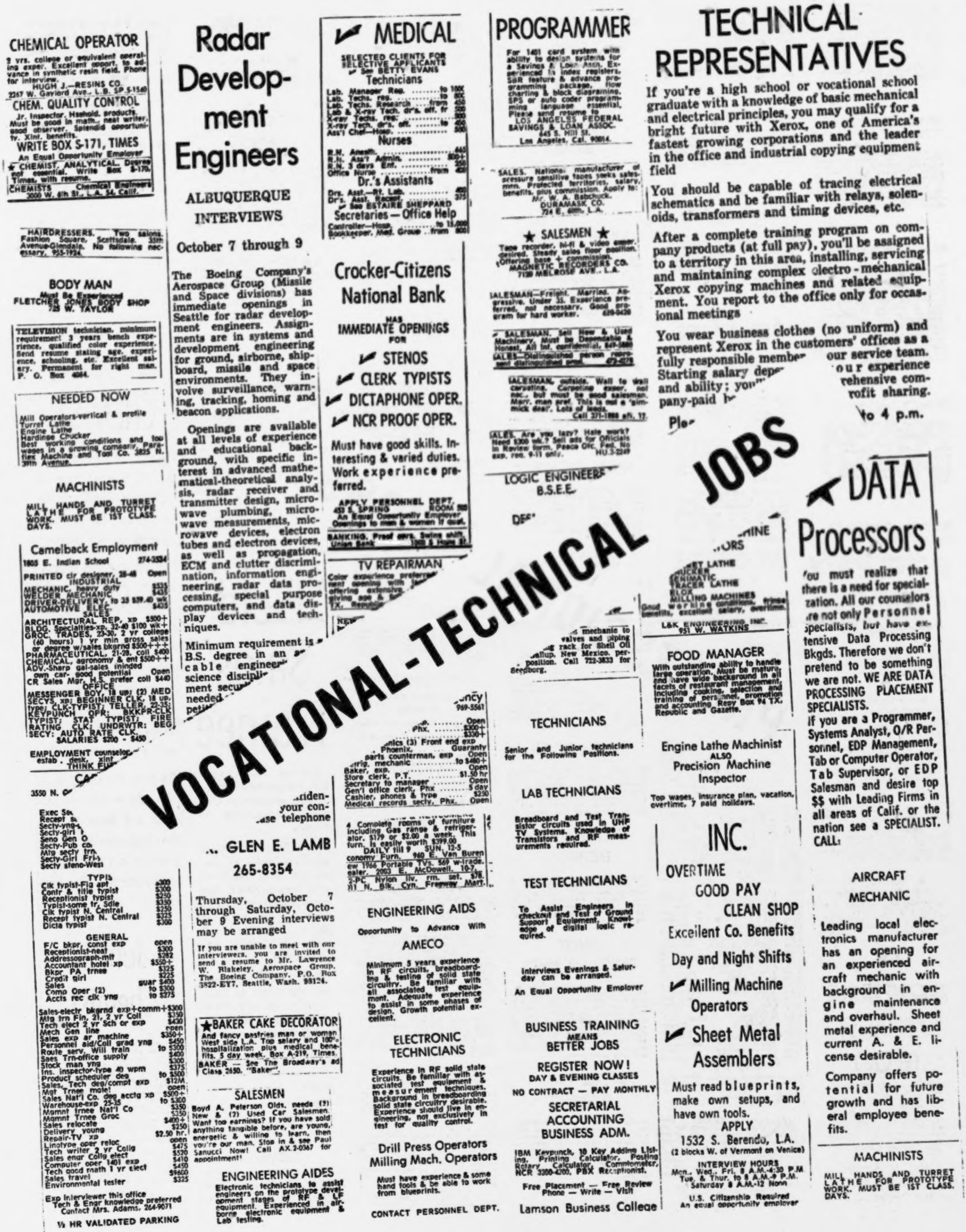

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Fig.8 Vocational-Technical Employment Opportunities

education and training.

Blue-Collar Workers

The most highly trained workers in this group, and the highest earners as well, are craftsmen and foremen - the "skilled workers". These workers will continue to have a more favorable employment outlook than the less skilled operatives and unskilled laborers. Skilled workers include carpenters, plumbers, electricians and other skilled building trade workers; skilled metal workers such as machinists, tool and die makers, and molders; and mechanics and repairmen for automobiles, factory machinery, airplanes, radios, television sets, and the like. All together, this group totaled about 8.5 million workers in 1960 and is expected to grow to more than 11 million by 1975.

Next to the skilled workers in importance are the operators, chiefly semi-skilled workers. The most numerous of all major occupational groups (about 12 million in 1962), they hold jobs in almost every major industry. Although considerable shifting will occur in the types of positions available, the number of operators will probably be a little over 14 million in 1975.

The third main group among blue-collar workers are the laborers. Over the past half century, their place in the labor force has dropped from 12.5 per cent to less than 6 per cent in 1960. Their number will remain about constant during the coming decade, but their proportion in the labor force will continue to drop - to less than 4.5 per cent by 1975.

Service Workers

The growing occupational group of "service workers" offers a great variety of job opportunities ranging from some quite unskilled jobs to those requiring special education and training. For example, janitors are included here, as well as waiters, cooks, barbers, laundry workers, beauticians, policemen, firemen, practical nurses, and FBI agents. By 1975, a numerical growth of service workers to about 12.5 million is expected, half again as many as in 1960. This increase would place them on a par numerically and proportionately with professional workers. The kind of service workers who will increase in number - policemen, firemen, hospital attendants and practical nurses, and others whose basic functions cannot be supplanted by machines - will require more training than many of the service occupations that are declining.

III. RELATION OF EDUCATION AND EMPLOYMENT

It is clear that multitudes of opportunities will open up for job seekers during the years ahead. The ability of young people to embrace these opportunities, however, will depend to a large degree on their education and training. The job world of the future obviously calls for people who have a marketable skill.

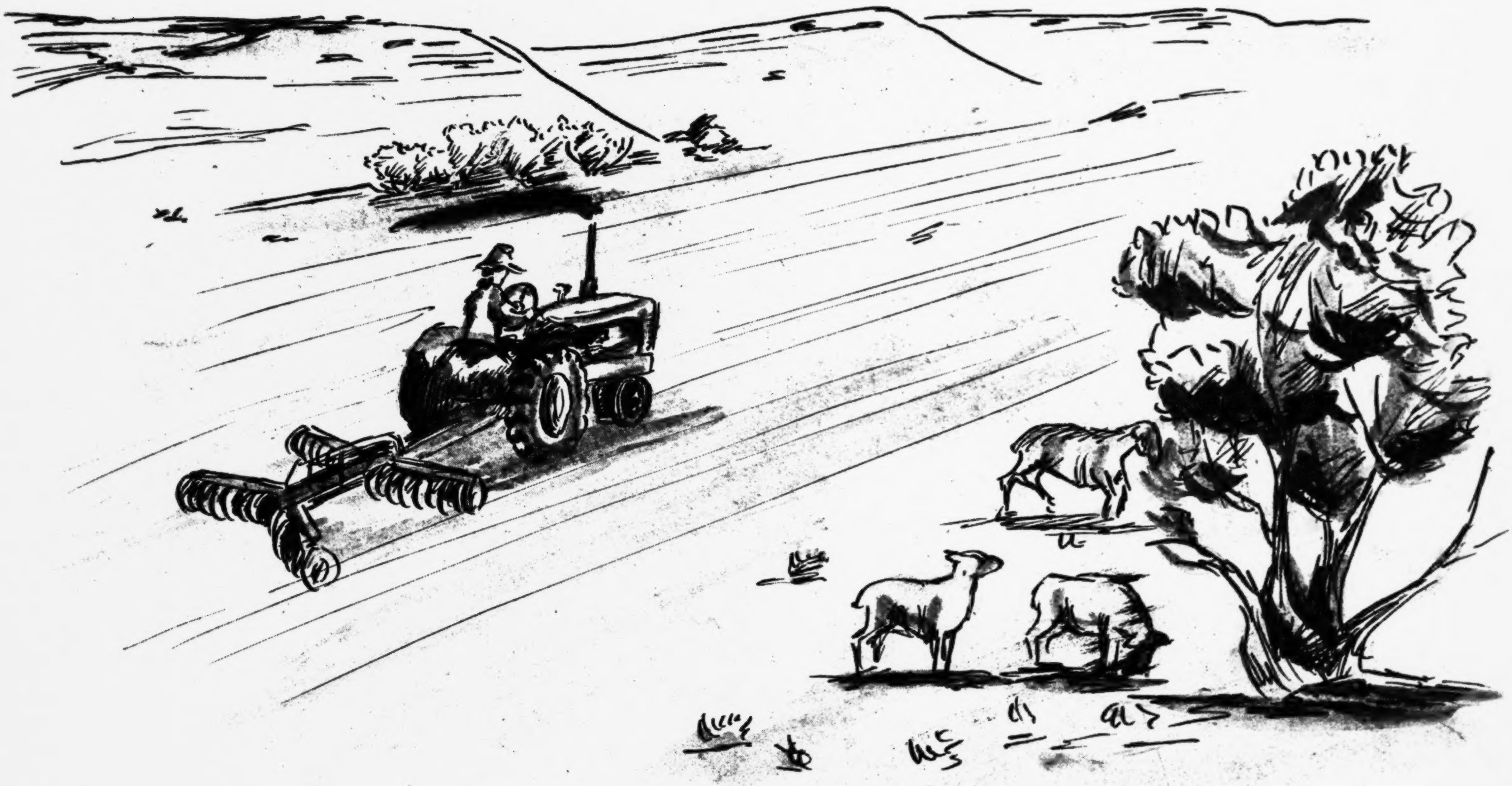
Since the fastest growing occupations also call for the most education or specialized training, it becomes obvious that a young worker's chances for a steady, well-paying job in many areas of the economy will be substantially less if he does not have at least a high school education. For many "growth" jobs, especially in the professions, he must have considerably more.

The need for educational upgrading of the work force will not be confined to the professions alone. The burgeoning field of technician jobs also increasingly calls for special preparation beyond high school. And, as new, automated equipment is introduced on a wider scale in offices, banks, insurance companies, and government operations, the skill requirements for clerical and other office jobs will rise also. The demand of employers for better trained personnel to operate complicated and expensive machinery is already apparent.

In some segments of the sales field, too, new developments in machine design, use of new materials, and the complexity of equipment are making it necessary for demonstrators to have greater understanding of technical matters; and repairmen must become familiar with ever more complicated machines.

The rising educational level of the younger population is a partial response to these developmental labor market requirements. Estimates covering the 25-year period between 1950 and 1975 give an indication of the continuing rise in numbers of high school and college graduates. By 1975, high school enrollment will be more than double the 6.5 million of 1950, and college enrollment will be almost four times the 2.2 million of 1950.

Young people who have acquired a skill or a good basic education will have a better chance at interesting work, good wages, steady employment, and greater satisfaction with life in general. Getting as much education and training as one's ability and circumstances permit should, therefore, be high on the list of things to be done by today's youth.



CHAPTER IV

PURPOSES OF A COMMUNITY COLLEGE

The community college or junior college is a relatively recent addition to the family of institutions of higher education. It has existed for a little over half a century. In general, the titles community college, two-year college and junior college are used interchangeably.

The community college offers two years of post high school education. This education constitutes a terminal program or the first two years of a four-year college program. Therefore, the quality of work must be equivalent to lower-division college or university work.

However, the community college concept suggests the possibility of modifying the instructional program in a manner which will be adapted to community needs. The 'community' may be a town, a county, or a region which is closely knit together by cultural, vocational, or educational similarities. The college recommended in this report to serve the people on the Navajo Reservation might well be called Navajo Community College.

I. GROWTH OF JUNIOR COLLEGES

The first private junior college was established within the framework of the University of Chicago in 1892 and the first public junior college in Joliet, Illinois, in 1902. Establishment of junior colleges has proceeded steadily. In 1938-39 there was a total of 575 private and public junior colleges enrolling 196,710 students. Although the number of colleges increased only slightly, to 594 by 1952-53, the number of students had more than doubled to 560,732. By 1958-59, there were 677 junior colleges enrolling 905,062 students. In 1965, there were over one million students in more than 700 junior colleges.

The growth trends of junior colleges in Arizona has followed the national pattern. The current growth of junior colleges in Arizona resulted from legislation enacted by the first regular session of the 24th Legislature creating a state system of junior colleges. Provisions were made for the appointment of a state board of directors for junior colleges and funds were made available for the operational costs of the state board for the year 1960-61. Eastern Arizona Junior College and Phoenix College were the only junior colleges in Arizona prior to the new legislation. Both joined the state system. The third college, Arizona Western College, was opened in September 1963. Currently, six separate junior colleges (Phoenix College, Eastern Arizona Junior College, Arizona Western College, Cochise College, Glendale Community College, and Mesa Community College) are providing instructional programs, with the latter two in temporary facilities. Phoenix, Glendale, and Mesa units comprise the Maricopa County Junior College System. Each of the other three colleges serve the entire counties of Yuma, Cochise, and Graham, respectively.

New Mexico did not have any public junior colleges prior to the enactment of the branch college laws of 1953. (N.M.S.A. 73-30-18). This legislation permitted an individual high school district, or a combination of two or more contiguous districts, to request an institution of higher education to offer subjects in the district. The program was to be under the control of the state institution but the local school district had to provide facilities. It was not until 1965 that legislation was enacted to permit the local district to bond itself to provide buildings. Three different institutions of higher education in New Mexico are sponsoring a total of ten branch colleges, the two closest to the Navajo Reservation are San Juan College at Farmington and Gallup Community College at Gallup.

In 1963, New Mexico enacted laws to permit the organization of independent junior college districts. Only one such district had been organized at the time of this report. It is located at Hobbs and encompasses the entire area of Lee County. The state legislature does not provide any financial support for such a junior college district.

In 1965, the New Mexico Legislature enacted legislation to permit the organization of technical and vocational institute districts. Again, the state provided that no state financial support be provided.

The Navajo Community College recommended in this report is to be one college in a 'county' junior college district. The legal and financial implications for its establishment are discussed in detail in Chapter VIII.

II. PURPOSES OF THE COMMUNITY COLLEGE

The purposes which junior or community colleges serve are generally accepted to be (a) general education, (b) transfer education, (c) occupational education, and (d) community services. A discussion of each follows.

General Education

General education in the junior college is that work which is designed to provide competence and general understanding for citizenship. The purpose of general education is to help all individuals, regardless of the diversity of their occupational fields, to communicate with each other and to understand the contributions each is capable of making to the development of America, as well as to help each individual achieve success in his personal life. In short, general education provided by the community college should help all to work together in America's increasingly complex and technical society.

Some courses offered during the first two years of college serve a dual function. They may serve as introductory courses for students majoring in a specific curriculum such as a course in history in the social science curriculum, or they may serve as general education for others. Some of these courses relate to a specific field, whereas others are a blend of the content of several fields.

A typical example of the latter is 'humanities', composed of carefully planned portions of art appreciation, music appreciation, world literature, and philosophy. The contents of the areas are not presented intensively as a body of material, but rather as related components which provide understanding of the basic content in each field. General education courses can be geared to the achievement and ability level of the students.

Transfer Education

Transfer education is the term applied to Junior college work which is intended to provide preparation for advanced college or university work. Transfer work will parallel in nature that which is offered in the first two years of existing four-year colleges or universities. If a student is successful in his pursuit of such a two-year academic program in the community college, he should be able to transfer this record of completed work to a four-year institution and continue uninterrupted toward a four-year degree.

Some of the transfer work in a junior college is actually general education courses in a sequence leading to a major or a minor block of academic work. These courses will be offered in the fields of English, mathematics, the sciences, music, art, and so forth. Usually these are a part of a junior college curriculum in pre-law, pre-medical, pre-agriculture, pre-dentistry, pre-veterinary, pre-journalism, pre-engineering, and so on. It will be noted also that some of the work discussed under the next heading of 'occupational education' will serve transfer purposes.

Occupational Education

Occupational education is study which trains individuals for vocational and technical endeavors. This field serves three functions in a junior college. These include pre-professional training for those who pursue higher education in a four-year college, those who will terminate their formal education with the completion of junior college work and those adults who feel the need for additional training either to upgrade themselves in their present position or to prepare themselves for work in another area. Pre-professional work is associated primarily with transfer education discussed in the previous section.

Closely allied with pre-professional students are the semi-professionals who do not desire to transfer for training toward the professions but rather want to serve as aides to the professionals. In engineering, these persons might be classified as engineering or technical aides whose main function would be engineering assistants or advanced technicians. Their work would encompass such areas in industry as design, experimental work, evaluation, computation and drafting. Although this area is thought to be primarily a two-year terminal curriculum, most of the courses selected should be transferable to a four-year college if a student should change his educational goal.

Students in technical education should select courses specifically related to their areas of interest. Occupational opportunities for students completing this curriculum would include engineering drafting, machine design and layout, shop supervisors, inspectors, and aides to contractors and consulting engineers.

The vocational phase of occupational education normally would not exceed a two-year program and in some cases may be a one-year program. Outlets for training in this aspect of occupational education include such endeavors as automotives, drafting and design, electricity and electronics, graphic arts, metals, construction trades, farming and cooking.

Community Services

The provision of community services is the fourth purpose indicated for the junior college. This phase of the junior college program serves all groups within the immediate community or in outlying communities. These may be formal or informal in nature and may have varying purposes. Similarly, the activities provided may be developed and provided for differing age groups.

The 'regular' program of the junior college has catered more in the past to an age group roughly 18 to 22 years of age. In recent years, greater attention has been given adults of all ages. Some of these desire formal course work toward diplomas or degrees while others desire short-term inservice courses or workshops to assist them in their vocations. Still others want avocational or cultural activities. In all instances, these are commonly called adult education.

Frequently, these are also services to 'the community' or to community groups. The scope included in community services is as great as in adult education. In reality, the term includes adult education groups of all descriptions - young, old, formal, informal, industrial, cultural, academic and recreational. The term 'community services' is all inclusive.

In summary, all efforts to improve the literacy of adults, to provide high school diplomas or junior college degrees, to assist adults with vocational improvement experiences, and to assist with community development and improvement, qualify under the heading of community services and would therefore be objectives desired in the program of the junior college. In general, this continuing educational program includes three categories: (1) cultural, appreciational, and general education; (2) academic content areas; and (3) vocational.

III. NAVAJO COMMUNITY COLLEGE

The program for the Navajo Community College to be outlined in this report should encompass all four purposes discussed, namely; (a) general education, (b) transfer education, (c) occupational education and (d) community services. These purposes are shown graphically in Figure 9. Although the college may not be able to be launched initially with full-scale offerings, the goal should be to reach that point as soon as feasible.

In order to serve the Navajo Tribe, the college should be located as nearly as possible to the 'hub' or center of student population. To serve all segments of college and adult age groups, it becomes apparent that there will undoubtedly need to be extension centers. These centers will offer courses of primary interest to specific students and will be within commuting distance of them. An example of this is the Many Farms agricultural area. Regardless of the location of the basic campus on the reservation, it is believed that certain courses and activities relating to agricultural training would need to be provided in that general area. Agricultural training should also be provided in a New Mexico junior college.

Similarly, extension classes may need to be planned so that Navajo youth and adults in each subagency would have greatly needed training programs accessible to them. Classrooms and other facilities required may need to be of a mobile type initially until those of a more permanent type of construction can be provided. This matter will be discussed more fully in Chapter VII.

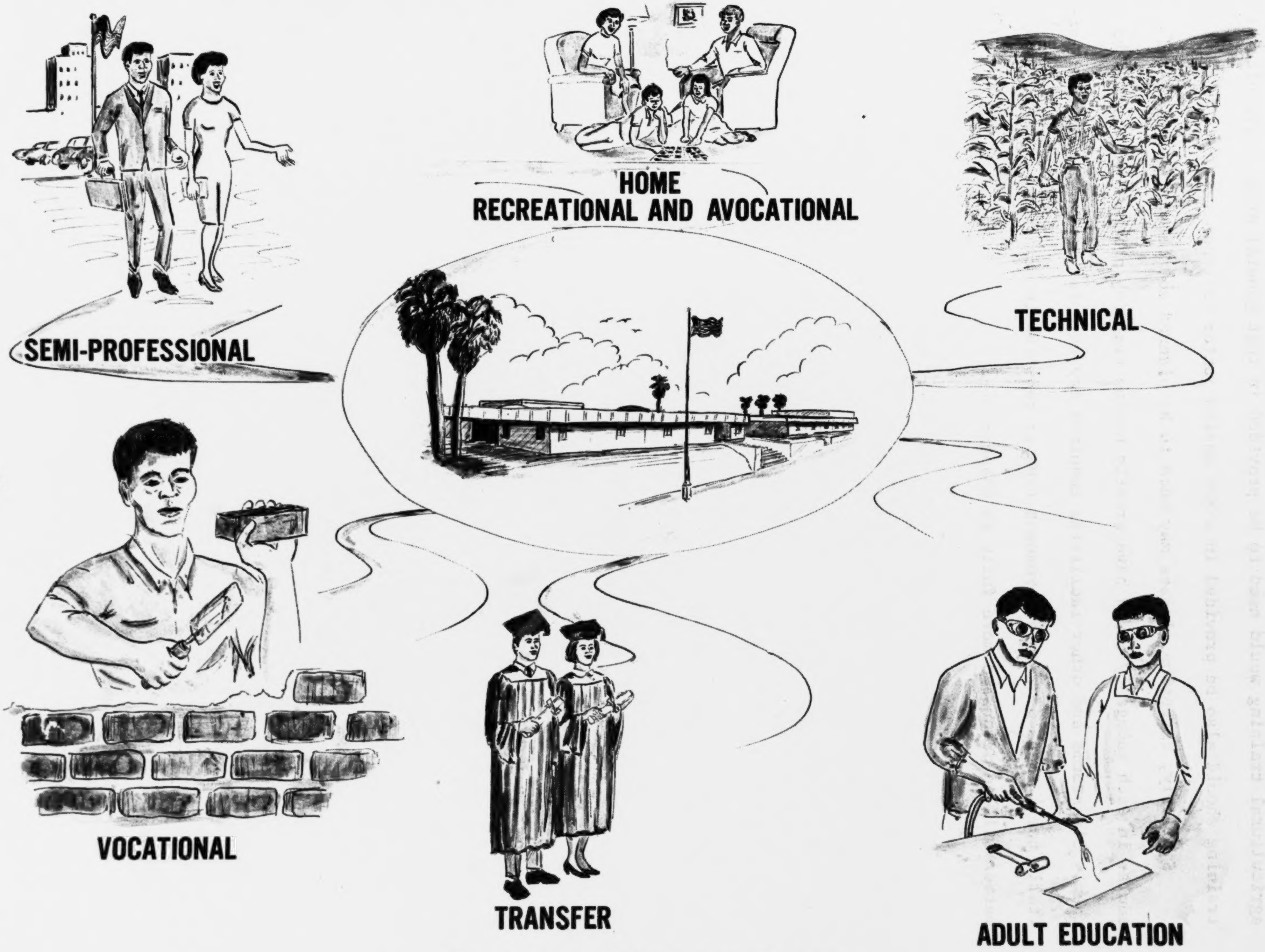

SEMI-PROFESSIONAL
HOME
RECREATIONAL AND AVOCATIONAL
TECHNICAL
VOCATIONAL
TRANSFER
ADULT EDUCATION

Figure 9. Purpose Of Navajo Community College

CHAPTER V

STAFFING THE COMMUNITY COLLEGE

The effectiveness of a community college is largely determined by the people who provide its many services. These people include administrative personnel, instructors, instructional assistants and non-instructional employees. Each group is composed of individuals performing different functions. The key to effective operation is having capable employees of all types who understand their duties and responsibilities and in sufficient numbers to care for all phases of the institution's activities.

Navajo Community College will have need for full-time specialists in some positions at the outset. However, in others one person will be able to serve in two or more capacities. As the number of students increases and the college's program expands, the number serving in more than one capacity will decrease until virtually all specialists should be serving in a single position of responsibility.

I. ADMINISTRATIVE PERSONNEL

The key position to be filled is that of executive dean of the college. An outstanding individual should be selected for this position approximately 18 months before the college opens. This person should be employed before any buildings are planned or any other personnel appointed. His selection is strategically important in developing a community college which will best serve the Navajo people. He should be a professional educator with special preparation for his responsibilities in administering the total program and with a dedicated interest in occupational education. Advanced graduate work in college administration is desirable. Other factors of preparation and experience are important but are not discussed here. Similarly, qualifications and job descriptions for other positions are not presented in this report. When the executive dean is selected, it is assumed that he will provide leadership in selecting people for other positions in keeping with the requirements of the college's purposes and program.

The second appointee should be the dean of business services for the college. He should be selected by the executive dean and should be authorized to begin as soon as possible after the latter in order that the two administrators can plan together from the beginning for the buildings and budgetary needs. If the college is scheduled to open in September 1968, the executive dean should be selected no later than April 1, 1967, and the dean of business services by June 1, 1967. The appointments to these positions at earlier dates would be desirable if possible.

The dean of instructional services should be recruited and appointed next. His selection by September 1, 1967, is desirable. This person should have had experience as a vocational or technical teacher or administrator. He will have the task of planning specific curricular offerings and building the schedule which must be announced several months in advance of September, 1968. The director of the instructional materials center should be selected also by September 1, 1967, in order to secure adequate materials for the library and the audio-visual unit prior to the opening of the college. The instructional materials center, described more fully in Chapter VII, is intended to provide the normal library services, books, periodicals and study areas as well as the audio-visual equipment, radio, and television resources. In essence, the instructional materials center will serve as the center of learning and research on the campus.

Other special personnel needed several months in advance of the opening date are (1) the dean of student affairs, who can serve half time as registrar and director of admissions initially; (2) the dean of women, who may have a half-time instructional load the first year; and (3) the director of adult education and community services. These three employees should be selected by April 1, 1968.

Navajo Advisory Committee To College

Legal control of the Navajo Community College will probably be held by a county junior college board. This is discussed in Chapter VIII in relation to the legal implications. Because of the apparent need for the Navajo Community College becoming either one of two colleges in the general Apache-Navajo County area or a reservation center for an already-organized junior college, it is recommended that an advisory committee be formed to meet at regular intervals, perhaps on alternate months or quarterly, to discuss general plans for college development. The membership should be chiefly Navajo and should include from seven to nine persons. A plan should be established to provide for rotating membership on this Navajo Advisory Committee.

II. INSTRUCTIONAL PERSONNEL

Appointment of instructional personnel is not necessary until after the executive dean and other administrative personnel have begun work and until the dean of instructional services and his assistants have determined the extent of curricular offerings for the first year. For example, if maximum effort is given to occupational education programs, other areas of the curriculum may need to be offered in a more limited way. As instructors are recruited, it is strongly recommended that efforts be made to secure well qualified teachers who meet, or exceed, the certification requirements for junior college teaching which are minimal in the state and region where the campus is located.

Generally speaking, this requires that the instructor have at least the master's degree with a minimum of 40 semester hours of academic work completed in the subject field he teaches. Two years of graduate work is coming to be regarded as desirable with 60 semester hours of work in the teaching field. On the other hand, some of the instructional assistants in the vocational-technical areas may not hold graduate degrees but will have work experience to complement and strengthen their general qualifications. It is strongly recommended that the instructional faculty begin work by July 1, 1968. This will allow time for planning courses, for holding faculty meetings and for organizing instructional units. By this action, the faculty should be ready to initiate the college program with full momentum.

Figure 10 shows an organizational chart of various types of personnel recommended for Navajo Community College when all phases of its program are under way.

III. INSTRUCTIONAL ASSISTANTS

Reference has been made to certain instructional assistants. These include the director of the instructional materials center, director of guidance, guidance counselors, and instructional aides. All of these are vital to successful operation of an educational institution.

The director of the instructional materials center, as indicated previously, needs 12 months in which to select, order, receive, catalog, and shelve library books. The instructional materials center need not have a "full blown" list of materials when it opens but all material should be selected for serving crucial needs when the college opens. Audio-Visual materials are also to be selected and prepared for the opening of the college. An audio-visual assistant should be responsible for having equipment and resource materials available when classes begin. Therefore, he should be appointed somewhat in advance of the opening date.

The director of guidance and counselors should be available on July 1, 1968, when all instructional faculty members report. These important assistants need to be carefully selected because of the part they will play in the academic success of students.

Instructional aides include clerical personnel, assistants in some departments or divisions and individuals who perform detailed work activities essential to maximum effectiveness of instructors and administrators.

IV. NON-INSTRUCTIONAL PERSONNEL

Operation of a community college requires the services of a number of types of non-instructional or non-certificated people. These include secretaries, bookkeepers, cafeteria managers, cooks, custodians, bus drivers, maintenance and grounds men and

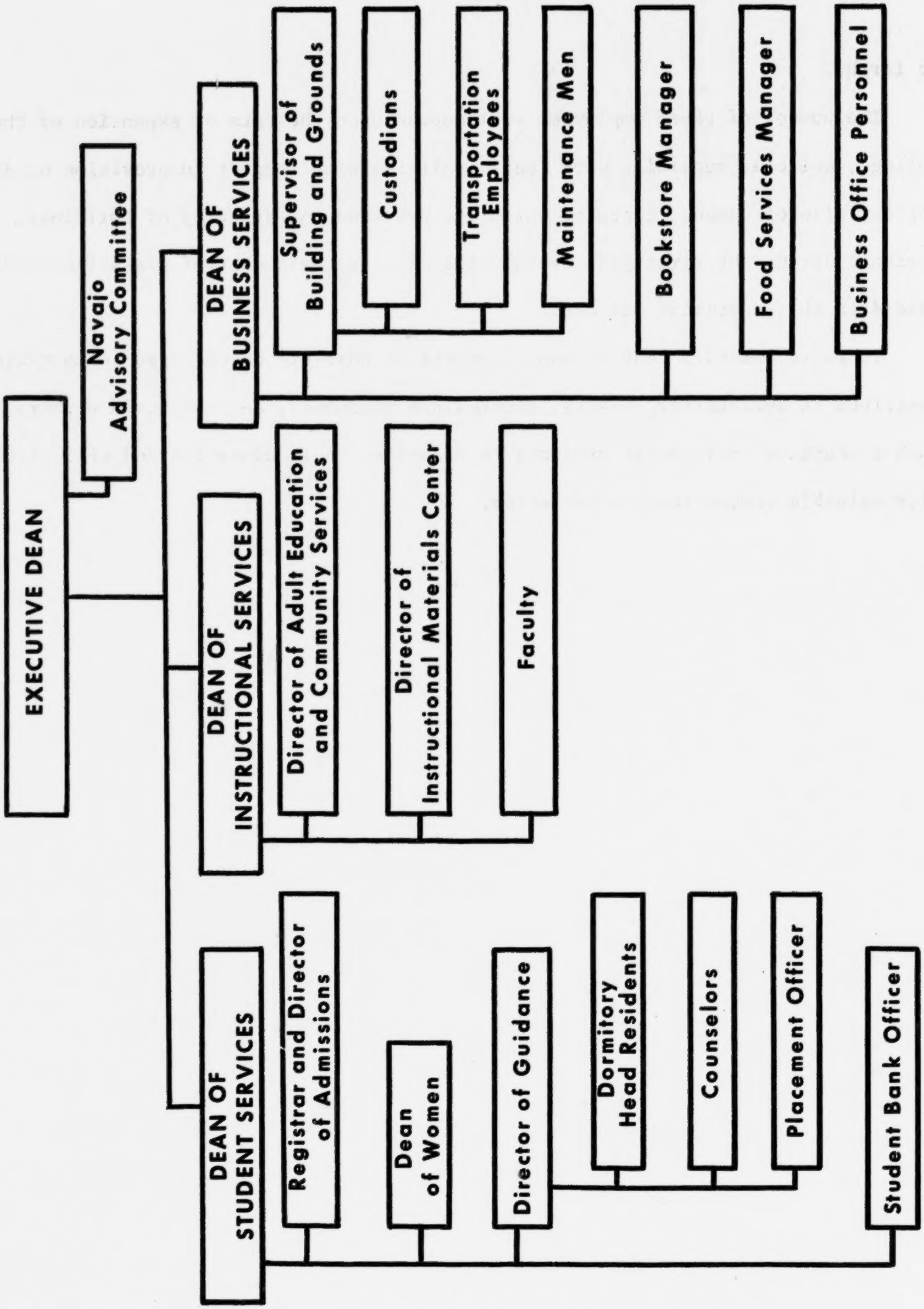
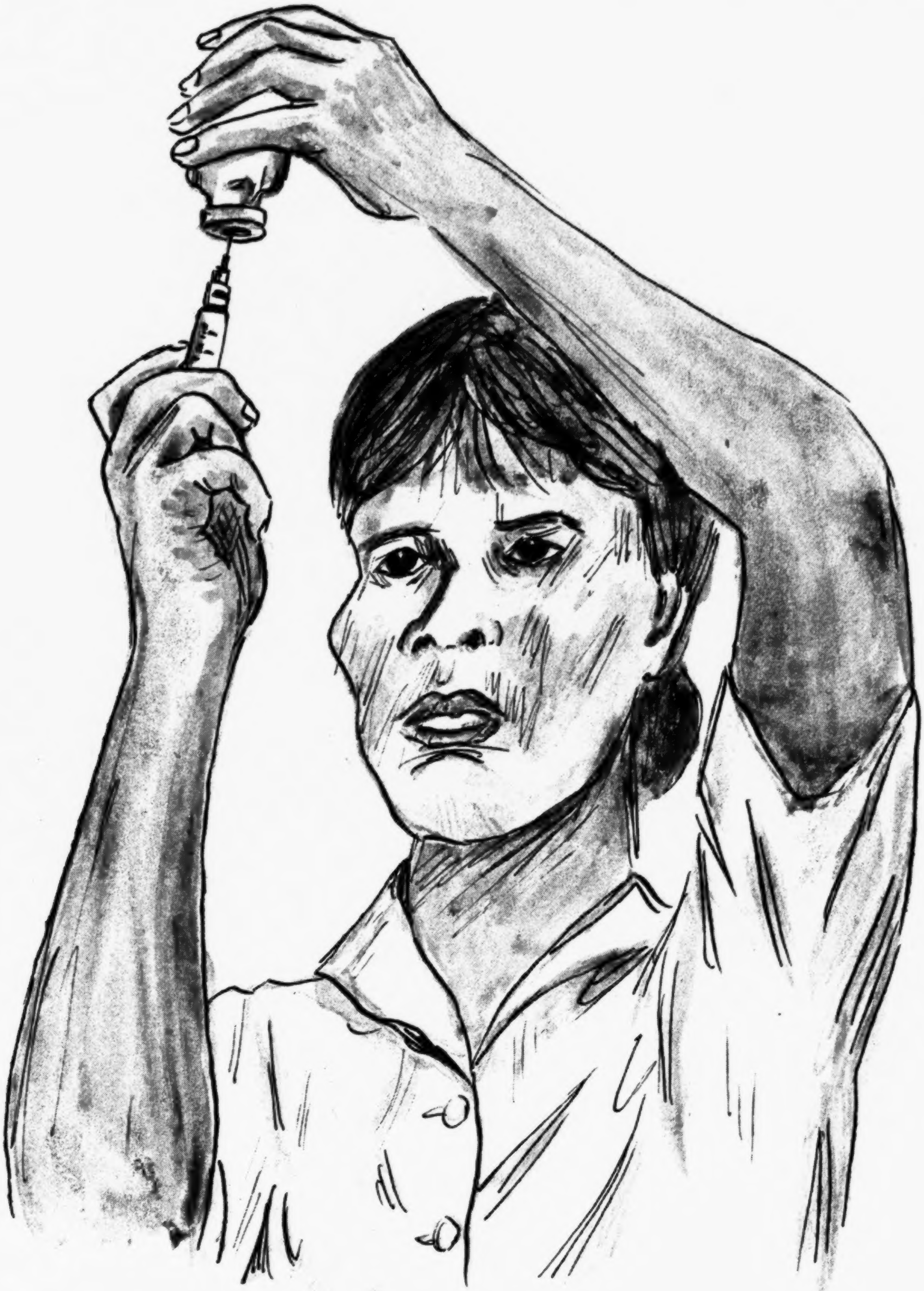

EXECUTIVE DEAN
Navajo Advisory Committee
DEAN OF BUSINESS SERVICES
Supervisor of Building and Grounds
Custodians
Transportation Employees
Maintenance Men
Bookstore Manager
Food Services Manager
Business Office Personnel
DEAN OF INSTRUCTIONAL SERVICES
Director of Adult Education and Community Services
Director of Instructional Materials Center
Faculty
DEAN OF STUDENT SERVICES
Registrar and Director of Admissions
Dean of Women
Director of Guidance
Dormitory Head Residents
Counselors
Placement Officer
Student Bank Officer

Fig.10 Personnel Organization for Navajo Community College

so forth.

The number of these employees will depend upon the rate of expansion of the college, policies regarding work loads, policies with respect to provision of dormitories, size of campus, types of buildings provided and priority of buildings. Experience during the first year or two will clarify the number of classified personnel needed in the respective offices.

It is recommended that as many students as possible be employed in part-time positions as secretaries, clerks, maintenance personnel, and cafeteria workers. Such a practice will assist students in financing their education and will also provide valuable occupational experiences.



CHAPTER VI

THE COMMUNITY COLLEGE'S EDUCATIONAL PROGRAM

I. THE NATURE OF EDUCATION

This study is based on the premise that education should be provided, and educational opportunity should be extended, to all residents of Navajoland who have the desire to avail themselves of the opportunity, and the ability to profit from it. Schools are already provided for children and youth through the high school level. It is recognized that all of education is not provided by a school or through a school system. But the school has become, and undoubtedly will continue to be, the principal institution for education. The public school is supported and controlled by an identifiable, organized social unit, and is responsible to it for the education which it provides. This is the basic consideration that must undergird the design and extension of the school and the total educational system for the Navajo people as a bi-cultural group.

Until relatively recent times, the education provided even by this country's better schools was limited essentially to the teaching of academic subjects. The basic purpose was to transmit to each generation the cultural heritage of the past. The cultural heritage was organized into units as subjects of study to be learned by each new generation to prepare them to take the place of the older generation as time and circumstance demanded. In this way the best of the past was passed on, civilized society was perpetuated and, hopefully, advanced. This system of education was not systematically challenged so long as society remained relatively static. However, as society became characterized by complexity and change, its advance by means of the conventional pattern of education presented a real problem. An academically oriented education is no longer satisfactory for our modern, highly complex and rapidly changing society. It has become necessary (1) to offer a widely diversified array of subjects in secondary schools and colleges, and (2) to provide the opportunity for more people to continue their education in schools for longer periods of time, and at different periods throughout their lives. The community college is one type of school that can provide for an extension of education and a diversity of educational opportunity to meet the needs of people with varying abilities, interests and ambitions.

As these developments of diversity and extension of education took place, an awareness also developed that something was lacking in the educational process. It became apparent that the total emphasis on the teaching of subjects was not enough. This awareness has led to the realization that the learner must be considered as well as the subject and the teacher. Attention needs to be given to the learner's emotional and social development, abilities and vocational goals if he is to become a person of dignity and worth and a productive member of society - a self-directing and responsible citizen. It is this added realm of learning, closely related to, but usually not a part of the instructional domain, that has become known as "guidance". Thus, in modern schools, education is provided through a program of instruction and through a program of guidance.

Out of this concern for the total individual grew an awareness of the importance of motivation in the learning process. Properly motivated, the individual seeks to learn "on his own". He seeks opportunities to learn the things that will permit achievement of his goals. Without motivation, no learning takes place. Therefore, motivation must be of vital concern in the development of instructional and guidance activities.

In addition to a discussion of the instructional program and guidance program, this chapter will include sections on instructional materials and community services.

II. THE INSTRUCTIONAL PROGRAM

Curricular Standards

American Association of Junior Colleges. The legislative committee of AAJC has stated that the program of the public junior college should be varied and comprehensive and that the following curricular areas be viewed as proper offerings:

1. General education for all regular full-time students
2. Courses equivalent to those taken in freshman and sophomore years of the university
3. Vocational-technical and semi-professional programs
4. Continuing or adult education
5. Community or area service programs
6. Services for testing, guidance, and individual development.

Arizona State Board for Junior Colleges. This Board has accepted the recommendations of the AAJC as sound and reasonable guides, has established these curricular and service areas as standards for the junior colleges in Arizona and requires each junior college to implement these areas with suitable courses of study.

In addition, the Arizona State Board for Junior Colleges requires satisfactory credit in the following courses to meet graduation requirements:

1. English - 6 semester hours required with recognition of advanced placement
2. Physical Education - 4 semesters, required of activity courses and/or content courses, with uniform exemptions to this requirement granted for physical disability, service in the armed forces for 90 or more days and for married women
3. Social Science and Behavioral Science - 3 to 6 semester hours required
4. Science - Mathematics. 7 or 8 semester hours required with at least 4 semester hours in a science class
5. Humanities - 3 to 6 semester hours required.

In addition, the state board urges the district governing boards to establish technical-vocational and continuing education programs suitable to their respective counties, and to initiate and continue curricular studies and advise the state board of their findings and recommendations. To insure persisting academic and vocational vitality, all agencies of the Arizona Junior College System must pursue and cooperate in creative and meaningful curricular exploration and determination.

Navajo Community College. The academic standards of this college should equal those of any college in the state. The students pursuing transfer programs should be able to transfer and perform successfully in a four-year college or university. Students enrolled in vocational or technical programs should be employable either on or off the Navajo Reservation. At no time should the program be less demanding than those in similar institutions. The Navajo student has the ability to succeed in academic or vocational work. Success in academic subjects is highly dependent on the achievement level obtained upon high school graduation. With improved economic conditions on the reservation, more and more families will be subscribing to newspapers and magazines and thus make possible the improvement of communicative skills of children in the homes. In the years ahead, the average difference in achievement levels between the Navajo high school graduate and the average high school graduate in the United States will be lessened. Success in college is closely related to a student's ability to communicate. This ability is a verbal ability, one that aids the student in reading and interpreting meaning of the printed word. Intelligence is many-sided. Intelligence might be measured in any one of the following areas:

Verbal ability
Mechanical ability
Spatial visualization
Reasoning
Perceptual speed
Number ability
Word fluency.

Navajo high school graduates rate high on some of these tests of intelligence. However, the tests that relate strongly with success in a four-year college or university are the verbal ability and word fluency measures. Because many Navajos learn English as their second language, and because they are not exposed to English usage as frequently as the English-speaking students in our schools, measures on these types of tests do not correctly assess the potentials of the Navajo high school graduate. Those who can perform well on these types of tests can successfully pursue programs leading to teaching, law, medicine, engineering and other professional programs. Those who do not demonstrate high ability on these types of tests, and who wish to continue their education, must do one or the other of the following: (1) erase deficiencies by a remedial program prior to the pursuit of a four-year college program, or (2) choose a program in which other factors of intelligence are important. In the years ahead these kinds of programs will fit individuals for the types of jobs that will predominate in our social and economic lives.

Admission Standards. All graduates of approved high schools should be admitted. All non-graduates who are 18 years of age or older should be admitted if they demonstrate abilities indicating potential success in programs offered. Admission to the college does not necessarily mean admission to any program offered. Test scores as well as record of performance in related studies should be utilized by both the student and his counselor in working out details for a program. Insofar as possible, the college should operate on the "open door" policy.

Course Standards. High standards should be maintained in all courses offered whether such courses are for credit or non-credit. The college will receive state financial assistance for students enrolled in "regular courses". These courses must meet the following requirements: (1) courses described in the catalog, approved pursuant to the law, and taught by properly certificated teachers; and (2) courses listed for credit in the catalog, and applicable toward a degree or authorized certificate; or prerequisites to such courses.

The regular day enrollment may be counted for students meeting these requirements: (1) students registered in regular courses, and (2) students who have completed formal registration, including the filing of an admission application and transcripts, and are approved for a formal educational plan leading to a defined educational goal. These students will be designated as "regular students".

Graduation Standards. For the two-year diploma, the college should establish uniform graduation requirements that include the requirements established by the Arizona State Board of Directors for Junior Colleges. The graduation requirements should be determined by the cooperative efforts of administration, local board, teachers, and community. However, the requirements should approximate the following:

A minimum of 60 semester hours of credit including:

English	6 Hrs.
Physical Education	4 "
Social Studies	4 "
Science and Math	7 "
Humanities	3 "
Transfer Major	12 "
Occupational Major	20 "

Grade point average equal to C or better

Courses Required By All Students. Only two specific courses will be required by all regular students. One will be a course in government carrying one semester hour credit and required each semester. In one semester, emphasis will be placed on student body government. In following semesters, emphasis will be placed on local-state-county government, federal government, and tribal government. Students will have opportunities to observe and practice phases of government during their college careers. The other one-hour course, physical education, will be required of all students not exempt for a valid reason.

Transfer Curricula

At the outset, the number of transfer curricula will necessarily be limited for two reasons: (1) an adequate number of students who wish to pursue programs, and

(2) the heavy emphasis that should be placed on occupational programs because it is in these areas that the greatest needs exist.

The survey team presents 18 possible programs that might be considered. It is not expected that this number of programs could be offered prior to the fifth year of operation. However, the initial number of programs, possibly 10, can be determined by faculty, administration and board working together. These curricula are listed here so that the reader can review the scope of a program of studies for those who wish to transfer to four-year colleges. Ten years from the opening date, the college might offer all of these transfer programs. In addition, provision should be made to work out satisfactory curricula for those who wish to pursue medicine, law, teaching, and other professions. Most of these will be available with the course offerings.

1. Agriculture
2. Art
3. Behavioral Sciences
4. Business
5. Data Processing
6. English
7. Forestry
8. Home Economics
9. Journalism
10. Life Sciences
11. Mathematics
12. Medical Technologist
13. Music
14. Nursing
15. Physical Sciences
16. Social Sciences
17. Spanish
18. Speech Arts

Each curriculum will be briefly described. The courses that might be offered are listed but officials should not consider that all of these are essential. They are neither all inclusive, nor are they properly labeled. Personnel who will teach these courses, administrators who will oversee the instructional program, and listings of courses in other Arizona junior colleges, should be consulted in determining specific titles and descriptions. Some courses in these curricula are equally applicable to the occupational curricula and are so listed. A suggested type of two-year program will be provided for each curriculum; however, only the first one, Agriculture, will be presented in detailed form in this chapter. The others will be found in the appendix.

More detailed notes and suggestions by the consultants will be made available to college personnel if and when the college opens. It was impracticable to include such detailed discussions in this report. Many consultants offered valuable and constructive suggestions relating to the building and facility requirements. These comments will be very helpful to the college officials and instructors in planning.

Agriculture. For students who wish to pursue a four-year program in agriculture and to earn a bachelor's or higher degree, the following agricultural courses may be provided: Crop Production, Livestock Production, Soils and Fertilizers, Farm Economics and Finance, Farm Machinery Operation, and Farm Machinery Repair. The student will need a minimum of 12 semester hours in the major area and will need to meet other graduation requirements. A suggested sequence of courses for the two-year transfer program is presented.

Freshman Year

Courses	1st Sem.	2nd Sem.
English - English	3	3
Humanities - Speech	3	3
Government	1	1
Physical Education	1	1
Chemistry	4	4
Crop Production - Livestock Production	3	3
Agricultural Math - Dairy Production	2	2
Totals	17	17

Sophomore Year

Courses	1st Sem.	2nd Sem.
Government	1	1
Physical Education	1	1
Botony - Zoology	4	4
Organic Chemistry - Quantitative Analysis	4	4
Soils & Fertilizers - Farm Econs. & Finance	3	3
Livestock Mktg. & Prod. - Vegetable & Specialty Crops	2	2
Elective - Farm Machinery Maintenance	3	3
Totals	18	18

Art. Four-year programs in art are generally offered in one of the following areas: Art Education, Advertising Art, Sculpture, Ceramics, Painting, Design, Photography and Art History. Courses that might apply to any of these include: Basic Design, Drawing and Composition, Beginning Painting, Ceramics, Art History to the Renaissance, Life Drawing, Sculpture, Renaissance Art History and Crafts.

Behavioral Sciences. Courses in the behavioral sciences are designed for students majoring in several other areas and also for those who wish to pursue a four-year program in anthropology, psychology, philosophy or sociology. Anthropology courses might include: Introduction to Anthropology, Peoples of the World, and Ethnic Group Relations. Courses in psychology might include: Introduction to Psychology, Applied Psychology, and Social Psychology. Only two philosophy courses would probably be needed. Introduction to Philosophy, and Philosophies of the World. The sociology courses might include: Introduction to Sociology, Social Problems, and Marriage and Family Relations.

Business. Four-year programs in business are available in many areas. However, some courses are basic to all. The following courses are either basic to all or basic to individual fields: Introduction to Business, Business Calculations, Accounting I & II, Principles of Economics, Business Statistics, Business Communications, and Business Law.

Data Processing. A four-year training program in data processing will require the following basic courses in data processing: Introduction to Data Processing, Control Panel Principles, Computer Programming I and II, Basic Computer Systems, and Systems Design and Analysis I and II.

English. Courses in English should be designed for the occupational students as well as for those who wish to transfer. But, for those who wish to transfer and earn a Bachelor's degree in English, the following courses should be offered: English I & II, Introduction to Literature, and Survey of English and American Literature.

Forestry. The forest industries on the reservation should attract many Navajos. Forest management requires a four-year college program. Closely allied with forestry are game management, soil conservation and range management. A student who wishes to secure a bachelor's degree in forestry will not take any forestry courses in a junior college but will pursue pre-requisites outlined in the appendix.

Home Economics. Home Economists are employed as teachers, home demonstration agents, utility representatives and in many other fields of endeavor. Courses in the college could be correlated with other community development activities. Students can design upholstery fabrics, assist in the furnishing and arranging of furniture in houses built by boys and practice skills in the housing and feeding operations. Courses that might serve the transfer purpose are: Elementary Nutrition, Clothing Construction, Clothing Selection, Applied Food Principles, Housing & Home Furnishings I & II, Personal Adjustment for Family Living, Meal Management, and Child Development.

Journalism. This program of studies is designed to prepare a student to continue a four-year program in journalism. Completion of only two years will provide competencies that can be used in newspaper work but to a limited extent. Courses will include: Journalism I & II, Ethics of Journalism, Photography I & II, General Business Management, Typewriting, Creative Writing, and Publications Laboratory.

Life Sciences. These courses are recommended to meet the requirements of students who will transfer to a four-year institution and pursue any of the following: biology, botany, pre-dentistry, pre-medicine, agriculture, pharmacy, zoology, biology teaching and medical technologists. Some of the courses are basic to many of the two-year occupational programs. Appropriate courses include: General Biology I & II, Anatomy, Physiology, Microbiology, Principles of Genetics and Basic Pharmacology. Courses in Botany and Zoology should be added in the coming years.

Mathematics. Courses in mathematics will be offered to provide some students with the necessary skills to be successful in other courses, i.e., physics, chemistry and business courses. For students who wish to pursue a bachelor's degree in mathematics, or to pursue an engineering or physics program, the following courses might well be offered: General Mathematics I & II, Intermediate Algebra, College Algebra, Trigonometry, and Analytic Geometry and Calculus I, II, & III.

Medical Technology. No courses in this field are offered, but students who wish to secure a four-year degree in medical technology would pursue the program suggested in the appendix. Completion of such a degree would allow the student to become registered as a medical technologist according to the standards established by the American Society of Clinical Pathologists.

Music. Persons majoring in music can take courses in this curriculum and can transfer to a four-year program and major in one of the following: music, music education or music therapy. Courses offered will include: Fundamentals of Music, Introduction to Music I & II, Integrated Theory, Applied Music-Private Instruction I & II, Basic Instruction, Class Piano, Class Voice, Chorus, Symphonic & Marching Band and Ensembles.

Nursing. The student who wishes to secure a bachelor of science degree in nursing (B.S.N.) would take courses in basic sciences in preparation of work to be taken after transfer to a four-year institution. This degree would prepare the student for beginning level Public Health Nursing positions as well as staff nursing positions in hospitals.

Physical Sciences. Students may wish to pursue majors in chemistry, physics, or meteorology in a four-year college. The first two years have many basic courses to all of these fields. Courses offered could include: General Inorganic Chemistry I & II, General Organic Chemistry I & II, Biochemistry, General Physics, Earth Science and Meteorology.

Social Sciences. Courses in social science are designed to meet the requirements of students who will transfer to a four-year institution and major in history, political science, or geography. Courses will also meet social science requirements for students majoring in other curricula. Courses would probably include: Government, Western Civilization I & II, United States History I & II, History of the Navajo, American Government, State and Local Government, Public Administration, Elements of Geography and Economic Geography.

Spanish. Because Spanish is the language of many of the Navajo's neighbors, it would seem logical to offer this foreign language. Other foreign languages might be offered when the college grows. Spanish should be for those needing speaking fluency, such as policemen, and should serve as the basic work for a person who wishes to secure a four-year degree in Spanish. Courses would probably include: Beginning Spanish I & II, Intermediate Spanish I & II, Beginning Conversational Spanish, and Intermediate Conversational Spanish.

Speech Arts. The speech arts are designed to assist students with oral communications and drama production. The basic purpose of work in speech and drama should (1) contribute to general education (2) improve communications and vocational competency, and (3) provide a basis for transfer into a four-year college program. Courses might include: Remedial Speech, Discussion Techniques, Public Speaking, Introduction to Drama, Drama Performance, and Parliamentary Procedure.

Occupational Curricula

The developing needs of the reservation will require trained manpower as well as capital. The community college will be a valuable asset in training programs. Some of the greatest needs are in the following occupations: agriculture, automotive mechanics, barbering, building construction, business, cooking and baking, distributive occupations, lodging and food management, nursing, petroleum technology, police science, and X-ray technology. Not all of these could be developed for a beginning community college. Many others will be required in the years ahead. The following list of 32 occupational programs is presented to serve as a guide in future planning. The survey team considers all of these applicable. Others, not listed, might well develop within five or six years. Some of the curricula are two-year curricula and some are one-year programs. All are designed to meet the needs of students and all qualify under the general definition of courses established by the state board.

Advisory committees should be used in planning each of the occupational programs. Laymen, representing both labor and management, can be of great assistance in planning shops and laboratories, selection of equipment and planning layouts for use, the outlining of procedures, the planning of courses, the definition of training standards which relate to a given trade or occupational field and the placement of students in work situations.

A listing of the potential occupational curricula gives the reader an overview of the possible educational programs.

1. Aeronautical Technology
2. Agricultural Production
3. Air Conditioning & Refrigeration
4. Automotive Body Repair
5. Automotive Mechanics
6. Barbering
7. Building Construction
8. Business - General Business
9. Business - Office Services
10. Business - Stenographer/Secretary
11. Commercial Art
12. Cooking & Baking
13. Cosmetology
14. Data Processing Technology
15. Distributive Education
16. Drafting Technology
17. Electronic Maintenance & Repair
18. Electronic Technology
19. Heavy Equipment Operation
20. Lodging & Food Management
21. Machine Shop
22. Medical Assistant
23. Medical Laboratory Technician
24. Music
25. Nursing
26. Petroleum Technology
27. Physical Education
28. Photography
29. Police Science
30. Printing
31. Welding
32. X-Ray Technology

Aeronautical Technology. A two-year curriculum leading to the associate degree, designed to prepare students to successfully accomplish the written and practical Federal Aviation Authority's examinations for the Air Frame and Power Plant Ratings. Courses would include: Composite Aircraft Structures, Metal Aircraft Structures, Aircraft Maintenance, Aircraft Powerplants, Powerplant Maintenance, and Powerplant Accessories.

Agricultural Production. This program is designed to prepare qualified students to become skilled in the various aspects of farming and marketing operations that are distinctive and specifically adapted to the Navajo Reservation. Courses would likely include: Crop Production, Livestock Production, Livestock Health and Sanitation, Livestock Marketing & Utilization & Fertilizers, Vegetables and Specialty Crops, Dairy Production and Marketing, Poultry Production & Marketing, Farm Economics & Financing, and Agricultural Mathematics.

Air Conditioning and Refrigeration. The purpose of this curriculum is to prepare individuals for employment in the areas of installation, repair and maintenance of domestic, commercial and industrial heating and air conditioning applications. Courses in the curriculum would include: Heating Principles, Refrigeration Principles, Air Conditioning Controls, and Air Conditioning Laboratory I & II.

Automotive Body Repair. This curriculum is designed to prepare an individual for employment in auto body repair and finishing departments and shops. Courses will include: Auto Finishing, Auto Body Repair I & II, Auto Chassis I & II, Trimming, Finishing and Painting, and Auto Body Repair III & IV.

Automotive Mechanics. The curriculum is designed to prepare individuals for employment in the commercial repair and maintenance of automobiles, light delivery trucks, and pick-ups. Courses will include: Automotive Theory I & II, Auto Mechanics I & II, Machine Shop, Welding, Automotive Shop Practice I & II, Automotive Electrical Systems, and Servicing and Diagnosis.

Barbering. This curriculum would train an individual to cut hair and acquire knowledge that would permit him to pass examinations and become a licensed barber. Some of the courses would be the same as courses designed for cosmetology. Courses would include: Barbering I, II, III, & IV, Professional Ethics, Shop Management, Hair Styling, Scalp Treatment, and Arizona Law.

Building Construction. The two-year curriculum is designed to train individuals for positions in the broad field of building trades and related jobs. Much of the program would be on-the-job training. The instruction could be worked in conjunction with community development of housing. Courses would include: Architectural Drafting I & II, House and Roof Framing, Masonry, Cabinet Making I & II, Technical Information I & II, Mill Work, Surveying, and Building Construction Laboratory I, II, III, & IV.

Business - General Business. This program is to prepare an individual for a variety of office jobs requiring a general business background, with some specifications, for jobs such as accounting clerks, personnel clerks, and data processing clerks. The courses in the curriculum will include: Introduction to Business, Basic Typewriting, Business Calculations, Machine Calculations, Accounting I & II, Development of the American Economic System, Business Communications, Principles of Economics, Theories and Practices in Marketing and Management, Data Processing I & II, and Personnel Management.

Business - Office Services. This program is to prepare one for clerical positions in offices. Trained clerical workers are often identified by such job titles as typist, file clerk, cashier, receptionist, or general office worker. These titles in themselves do not necessarily identify separate office occupations; rather, they partially describe the nature of the duties performed. Courses commonly include: Introduction to Business, Basic Typewriting, Intermediate Typewriting, Business Calculations, Machine Calculations, Office Filing, Record Keeping, Business Communications, Advanced Typewriting, Data Processing I, Advanced Clerical Procedures, and Development of the American Economic System.

Business - Stenographic/Secretarial. This program is designed to prepare a person for a stenographic or secretarial position. Workers in these jobs may perform many of the duties assigned to general clerical workers, but in addition they will take dictation and will be expected to transcribe mailable letters and reports. The courses commonly included in the curriculum are: Introduction to Business, Basic Typewriting, Business Calculations, Machine Calculations, Office Filing, Record Keeping, Shorthand, Business Communications, Advanced Typewriting, Data Processing I, Transcription, Secretarial Accounting, Office Appliances, Advanced Clerical Procedures and Development of the American Economic System.

Commercial Art. This training program is designed to prepare one for employment in basic art studio skills. Courses will include: Basic Design, Drawing and Composition, Photography I & II, Survey of World Art I & II, Life Drawing, Advertising Art, Lettering, Graphic Arts, and Principles of Art.

Cooking & Baking. This training program is to prepare one for a career in food service work. Personnel will work in cafes, restaurants, hotels, hospitals, school lunch programs and other food service activities. Courses included will be: Introduction to Food Preparation, Intermediate Cooking, Intermediate Baking, Advanced Cooking, Advanced Baking, Quantity Foods, Nutrition, Sanitation, Menu Planning, Special Catering and Purchasing, Storage and Record Keeping.

Cosmetology. This training program prepares students to become beauty operators who beautify the hair, skin, and nails. Courses included are: Elementary Laboratory, Elementary Salon Operation, Occupational Information, Hair Tinting, Hair Bleaching, Basic Manicuring and Facial Laboratory, Care of Hair and Scalp, Basic Principles of Trichology, Permanent Waving I & II, Hairstyling I & II, and Chemistry of Cosmetology.

Data Processing Technology. This program is designed to train people for occupational opportunities in data processing. The courses will include: Introduction to Data Processing, Punched Card Equipment I & II, Accounting Machines I & II, Control Panel Principles, Computer Programming I & II, Basic Computer Systems, and Systems Design & Analysis I & II.

Distributive Education. The curriculum is designed to develop occupational competency in areas of marketing, merchandising, and management. Courses will probably include: Business Calculations, Principles of Salesmanship, Introduction to Business, Accounting, Principles of Marketing, Principles of Economics, Sales Promotion, Principles of Retailing, Business Communications, Business Law, and Management Trends.

Drafting Technology. This curriculum is designed to train students for positions as drafting technicians in industry with entry title of junior draftsman. Specialized courses will include: Technical Drafting I & II, General Metals, Technical Drafting III & IV, Industrial Illustration, Technical Report Writing, and Machine Shop.

Electronic Maintenance & Repair. This curriculum is to prepare students in repair and maintenance of radio and television receivers and transmitters, station operation, airport electronics and communications equipment. Courses in the program include: Related Mathematics I, II, & III, Related Shop Science I, II, & III, Principles of Radio and Television I, II, III, & IV, Blue Print Reading, and Sketching.

Electronics Technology. This program is designed to provide fundamental abilities necessary for employment and industrial technicians in such areas as fabrication and wiring, production, testing, measurement, installation, maintenance, and sales. Courses included are: DC Basic Electronics, AC Basic Electronics, Technical Drawing, Electronic Circuits, Industrial Electronics, Electronic Circuit Analysis, Tube and Transistor Circuits, Advanced Circuit Analysis and Test Procedures, and Electronic Control Circuit Analysis.

Heavy Equipment Operation. A one-year program to train students for employment as equipment operators in heavy construction industries will include the following specialized courses: Diesel Engines, Vehicle Laboratory, Practical Surveying, and Equipment Laboratory I & II.

Lodging & Food Management. This program is designed to train personnel for the tourist industry so that people can assume positions of management in the housing and feeding industry. Specialized courses will include: Introduction to Housing & Feeding, Motel Accounting, Food Cost Accounting, Introduction to Food Preparation, Sanitation, Menu Planning, Purchasing-Storage-Record Keeping, Special Catering, Equipment and Layouts-Kitchens, Equipment and Layouts-Motels, Food Service Administration, and Front Office Operations.

Machine Shop. This program is designed to train students for employment in the metal working field. Courses will include: Machine Shop, Machine Tool Operations, Machine Tool Processes, Machine Elements, Testing & Measurement, and Production Tooling.

Medical Assistant. This term is used for three different types of positions.

The same basic program would be followed by each during the first year. Each would require slight modifications for the sophomore year. The programs will prepare people to fill the following positions: health education assistant, ward secretary, and, medical receptionist & clinic assistant. Courses basic to all three programs are: Healthful Living and Medical & Health Terminology. Specialized courses for programs, in order named, are: (1) School & Community Health I & II, Principles & Practices of Public Health, and Methods of Health Teaching; (2) Typing, Introduction to Data Processing, Filing and Records Management, Public & Human Relations, Secretarial Transcription, Health Agency Secretarial Function, and Advanced General Mathematics, and (3) Nursing I, in addition to courses listed under number (2).

Medical Laboratory Technician. The purpose of this program is to prepare students for careers as medical laboratory technicians in a clinical medical facility. Following completion of the suggested academic courses, the student would complete one year (12 months) of internship in an approved clinical laboratory and would then be eligible to take the registration examination of the American Medical Technologists (AMT). Specialized courses would include: General Inorganic Chemistry, General Biology, Integrated Mathematics (Algebra, Geometry & Trigonometry), Qualitative Analysis, Quantitative Analysis, Microbiology, Anatomy & Physiology, Genetics, and General Physics.

Music. This program is designed to prepare students to teach applied music on a private studio basis or to become individual performers as salaried musicians. Courses will include: Fundamentals of Music I & II, Introduction to Music I & II, Applied Music-Private Instruction I & II, Chorus or Band, Ensemble, and Integrated Theory I & II.

Nursing. This program will prepare those persons completing the sequence to take the state nurse registration examination to become a registered nurse. The level of preparation will allow persons completing the program and state examination to practice as a staff level nurse under supervision in a hospital or in selected clinic settings. At present there are at least nine U.S. Public Health Service hospitals with approximately 700 beds serving the Navajos on or near the reservation. More than 200 beds will be added shortly. Nurses are needed. Courses will include: Nursing I (Fundamental Principles), Nursing II (Basic Concepts and Practices of Care), Nursing III (Psychiatric Nursing), Nursing IV (Maternal and Child Nursing), Nursing V (Medical & Surgical Nursing), and Nursing VI (Trends in Nursing).

Petroleum Technology. This program is designed to provide training for men to fill the following types of jobs in the petroleum industry: mud engineers, drill cutting loggers, supply and equipment salesmen, research laboratory technicians, directional drilling engineers, and major company careers in drilling and production. Petroleum Technology (12 semester hours).

Physical Education. The purpose of this curriculum is to assist each individual in becoming a better person: physiologically, psychologically, and culturally. In addition, it will provide the basic skills and training for [illegible] employed in community recreation programs, outdoor education and camping programs. Courses will include: Recreation Leadership & Program Planning, Outdoor Education, Conservation, Camping, Camp Administration and Leisure As A Contemporary Social Problem.

Photography. This program is designed to train students in the art of taking pictures and the technical processing of developing, enlarging, tinting, and composition. Trained personnel will be needed to provide services to the growing tourist industry as well as growing photography needs of the Navajo. Courses will include: General Inorganic Chemistry, Art I & II, Composition, Photography I, II, III, & IV, and Shop Operation & Management.

Police Science. This curriculum is designed to prepare individuals for positions in law enforcement on the reservation and in other communities in the United

States. Courses offered will be: Introduction to Law Enforcement, Administration of Justice, Patrol Procedures, Criminal Investigation, Criminal Evidence, Criminal Law, Traffic Control, Juvenile Procedures, Firearms, and Defensive Tactics.

Printing. This program is designed to prepare students for employment in the broad field of printing and graphic arts industries. Courses will include: Composistion and Makeup I, II, III, & IV, Presswork I, II, III, & IV, Bindery I & II, Stereotyping, Printers English, Communications, Machine Composition I & II, Offset Presswork I & II, and Offset Camera and Platemaking I & II.

Welding. This curriculum is designed to prepare individuals for employment in commercial and industrial metal shops involved in construction, fabrication or repair. Courses will include: Acetylene Welding I & II, Electric Arc Welding I & II, Flame Cutting & Welding I & II, Advanced Arc Welding I & II, Inert Gas Welding, and Welding Metallurgy.

X-Ray Technician. A one-year program in general preparation, combined with an 18 month internship in the X-ray department of an approved institution would allow the student to function in an X-ray department in a hospital or medical laboratory. There is a critical need for X-ray technicians in hospitals on the reservation and nearby hospitals. This could be combined with medical laboratory technician in a two-year training program prior to the internship. Basic courses would include: Anatomy & Physiology, and General Physics.

III. THE GUIDANCE PROGRAM

The guidance program, like other components of the total educational establishment, must be carefully organized if it is to be effectively administered. Organization begins with a working philosophy of the total educational enterprise, and develops in terms of the identification and acceptance of clear-cut purposes and functions which establish the nature, scope and direction of the program. Organization precedes administration or management, and follows from function.

Organization is concerned with the design of a program which encompasses the desired purposes and functions. Administration is concerned with providing the necessary space, equipment, facilities, materials, finances, personnel, and public acceptance and understanding essential to smooth and effective operation of the organization.

Administration or management is responsible for:

1. Developing cooperatively with the board of education, and the entire educational staff, a working philosophy of education, and of guidance as an integral part of education;
2. Developing cooperatively with the guidance personnel the organized guidance program;
3. Providing the leadership and professional support required in launching and maintaining the program;
4. Directing the financial support and management of the program in terms of sound budgetary procedures;
5. Securing the necessary space, facilities, equipment, materials, and supplies required for the operation of the program;
6. Selecting qualified professional personnel needed to staff the program - e.g. a dean of student services, an admissions counselor and registrar, a counselor (dean) of women, professional student counselors, a health counselor (nurse), a test counselor (psycho-metrician), and residence counselors (head residents);
7. Conducting a sound [illegible] the community.

While all of these are important administrative responsibilities in the successful organization and management of a guidance program, the selection of qualified professional personnel is of crucial importance in the development and operation of the kind of guidance program here described for a newly established Navajo Community College. The guidance program cannot be a "borrowed copy" of successful programs found in community colleges in a dominant, but largely foreign, culture outside the Navajo "nation". The guidance program, as an integral part of the total educational program of the Navajo Community College, must reflect both the Navajo culture and the dominant culture of an "outside world". The program and personnel must be especially sensitive and responsive to the bi-cultural nature of the educational needs of a young generation of Navajo people who are faced with a rapidly changing "old culture" and a rapidly developing "new culture". This "new culture" must be created by blending the "best" of the "old from within" with the "accepted" from the "dominant from without". The "new culture" must not only be created, it must be learned, and learned largely in school. This becomes the "new" education for the young generation. Both instruction and guidance are imperative.

If the importance of the individual is to be properly recognized and dealt with in this new education, the guidance component must be in the hands of unusually competent professionals. In addition to the usual preparation and experience, they will need preparation and experience in dealing with people in two cultures. This will require a high order of competence in sociology, cultural anthropology, human relations, and the psychology of development and careers. Also some actual first-hand experience with Navajo culture. Guidance personnel of the caliber required may be difficult to find and expensive to employ.

The dean of student services who will serve as guidance director, must be this extraordinary type of person if the guidance program is to provide the unique educa-
community college. To settle for less than an exceptionally qualified guidance director and a professionally competent staff, would not only be poor economy, but educational folly. The guidance program can be no better than the personnel who provide it. Nothing less than a soundly conceived guidance program, organized and managed by a professionally competent staff, should be acceptable from the very beginning. To expect that a sound program will be developed by an incompetent staff, is to expect what never was, nor ever will be.

IV. INSTRUCTIONAL AIDS AND MATERIALS

Overview

An educational program is dependent on an effective system of transmitting knowledge and ideas. Traditionally, the teacher has served as the vocal transmitter of knowledge and the textbook as the written transmitter. Learning takes place through a number of senses, and a combination of senses. When the ear hears and the eye sees and the fingers feel, learning is more apt to take place than if only one sense is activated. Thus, the multi-sensory approach to learning is gaining in favor and the schools of tomorrow will readily use the technological aids to learning.

Figure II gives a graphic representation of the manner in which knowledge is increasing. The knowledge explosion makes it impossible for an individual to learn all that there is to learn. However, in order to learn as much as possible, the newer methods of imparting knowledge must be used to augment the teacher and textbook.

New school plants are being constructed on the basis that "form follows function". Buildings and equipment contribute to learning. The National Education Association's publication Schools for the Sixties, suggests that schools are moving from one point of view to another.

1.	The group	The individual
2.	Memory	Inquiry
3.	Spiritless climate	Zest for learning
4.	Self-contained classrooms	Self-contained school
5.	Scheduled classes	Appointments and independent learning
6.	Teacher as a general practitioner	Teacher as a clinical specialist (member of a team)
7.	School building use geared to an agrarian society - a 9-month year for children	School building use reflecting urban society - a 12-month year, available all age groups
8.	Classrooms that are like kitchens	Classrooms that are like library-living rooms
9.	Boxes and egg crates	Clusters and zones of space
10.	Teaching as telling	Teaching as guiding
11.	A teaching schedule of 30 hours a week with students and 15 hours for planning.	15 hours a week with students in class and 30 hours for research, planning and development.

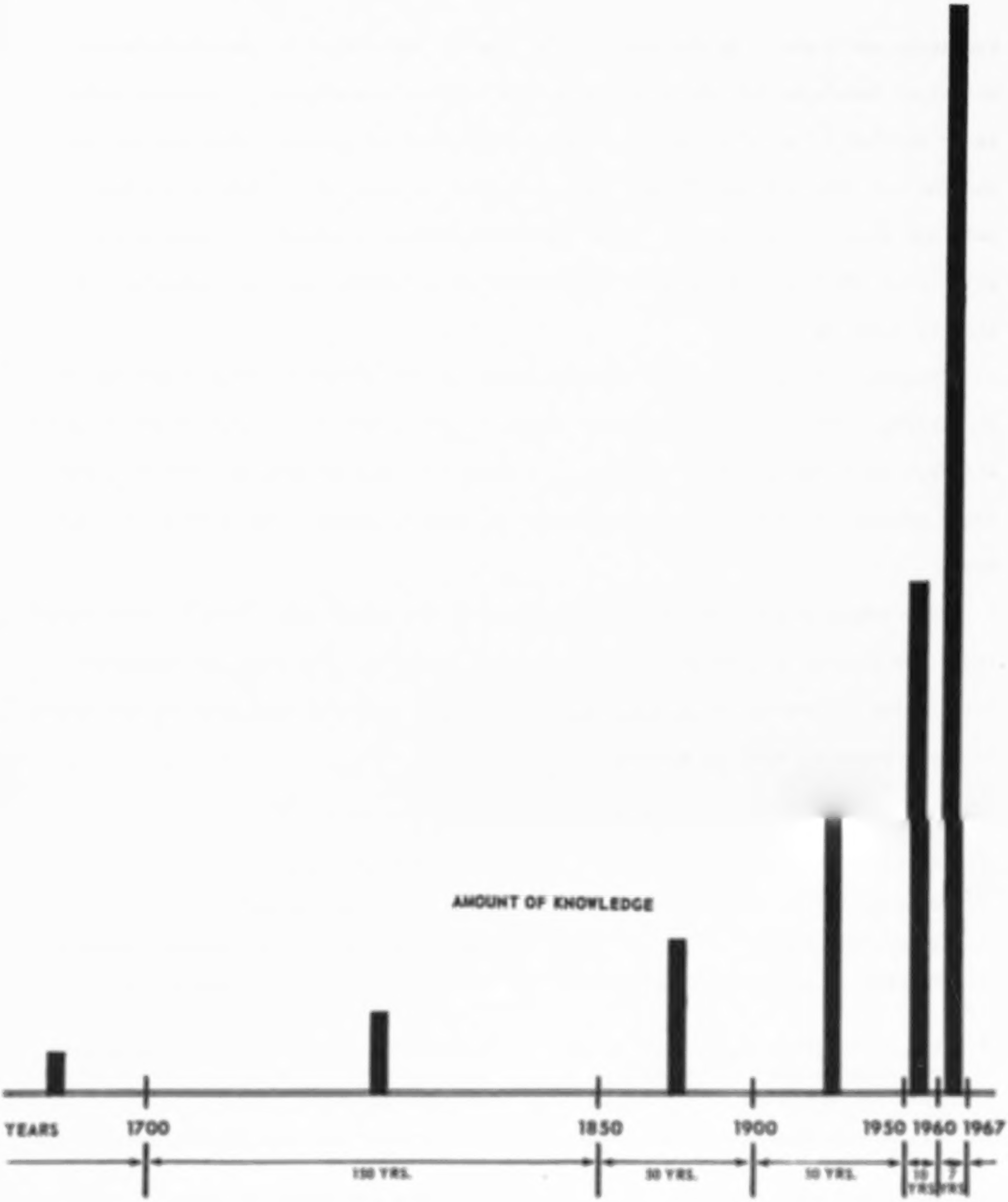


Fig.11 The Span of Years and the Doubling of Knowledge

The responsibility for providing instructional materials and aids to learning is rightly that of the instructional materials center. This center contains the library, instructional aids, projectors, television cameras, and a place for teachers to prepare aids that can be used in the classroom and laboratory. Essentially the center has two main functions. The first function to be discussed will be that connected with the work of an audio-visual director and the second that closely allied to the work of the college librarian. Either of these persons could serve as the director of the instructional materials center. Both would work closely together to make the best use of money and materials. Faculty members would seek the assistance of the center in developing learning laboratories for the various departments and subjects. Some laboratories would serve more than one function. These laboratories would have individual learning stations equipped with tape recorders, listening phones, projection space, and storage. Students would work at their own rates of speed. They would not have to schedule time for usage because an instructor would be on hand throughout the day to be of assistance.

Library

Book collection. The initial book collection should include at least 4,000 standards but, recognizing the limited curriculum and the emphasis on technical subjects, it is felt that a smaller collection may be satisfactory.

It is recommended that 1,000 volumes per year be added to the collection. The initial periodical subscription list should consist of at least 100 titles with 25 to 50 additional titles per year being added until 250 to 300 periodicals are received annually.

Cost of Materials. The original outlay for library materials, periodical subscriptions, binding and miscellaneous expense is estimated to be approximately $32,000. Thereafter an annual expenditure of $10,000 should be sufficient.

Personnel. One professional librarian or more and one full time clerk will be needed. At least 800 hours of student assistance will also be needed.

Building. Seating space should be provided for 25 per cent of the planned enrollment of 800, or 200 students. Stack space should be provided for 10,000 volumes with room to expand to 20,000 volumes. Office and workroom space of at least 500 square feet should be provided. Total library space should be provided as follows:

200 reader stations @ 25 sq. ft. each	5,000 sq. ft.
1,000 volumes @ .01 sq. ft. per volume	1,000 sq. ft.
Office and workroom	500 sq. ft.
	6,500 sq. ft.
Plus 1/3 for circulation	2,166 sq. ft.
Total space needs	8,666 sq. ft.

The above estimate does not include provision for audio-visual equipment and services.

Audio-Visual Aids

Modern instructional materials require the use of a variety of machines and procedures. Among the meachines and materials are the following:

Machines. 16 mm sound projectors, 8 mm sound projectors, 35 mm film-strip projectors, 2"x2" slide projectors, overhead projectors, opaque projectors, tape

Materials. 16 mm films, 8 mm films, 35 mm filmstrips, 2"x2" slides, overhead transparencies, study prints, maps, globes, charts, relia (specimens, models, mock-ups), displays, exhibits, dioramas, recordings, and self-instructional programs.

Cost Factors. The college should spend from one to one and one-half per cent of instructional budget on these materials. During the first years of operation it will be necessary for the college to budget money to rent many films. Other materials will be purchased from year to year in order to build an adequate supply.

Personnel. The person employed to acquire the A-V collection and be responsible for its proper use should be employed at the outset. Additional staff will be employed as the need arises. Thousands of dollars worth of equipment and materials will be under this person's supervision. He will be responsible for the selection, production, maintenance, utilization and evaluation. He must have the ability to work with other people so that the real value of the multi-approach to instruction will succeed.

The director should be competent in television production so that he can give assistance to the development of closed-circuit television instruction and the production of video tapes.

Radio and Television. Serious consideration should be given to the establishment of an educational radio station at the college. It should be powered, if possible, to reach all of the reservation. Its value to the Navajo people in terms of improving spoken language, the distribution of information, music, entertainment, and the like, cannot be overestimated.

It is recommended that all permanent buildings be equipped to handle closed circuit instructional television. This media will serve a variety of instructional purposes. Included might be instruction to all students in government, physical fitness and food preparation. For example, the campus food specialist will be able [illegible]. This may be a part of the instructional program for which students receive credit as they prepare meals for themselves and others.

In addition to their value to the total student body and community, radio and television installations will provide excellent student training stations in electronic technology, speech and drama.

As the number of television sets on the reservation increases, consideration should be given to installing an extended line-of-sight transmission of up to a fifteen-mile radius from the college to other schools and even homes. Eventually, microwave and translators might be installed to reach other parts of the Navajo Reservation.

Electronic Classrooms. In a few short years, the electronic classroom has moved from a rather primitive concept to a sophisticated teaching-learning environment that has proved of exceptional aid to various areas of education. Originally designed as a foreign language laboratory, the electronic classroom is now used for teaching a wide variety of subjects. Any situation requiring individualized study and a high degree of student participation can profit by the installation of an electronic system.

The electronic classroom in the Navajo Community College, as in other school systems, may be used to teach the following subjects: English literature, speech, music, shorthand and other business skills, foreign language, social science and skill areas where students listen and then do what they are instructed to do.

V. COMMUNITY SERVICES

Nature of Community Services

A distinguishing characteristic of a community college is that the college and the community work so closely together that it is difficult to determine when the community is serving as a laboratory for student learning and when the community is receiving services from the college. Many areas of service are found in com-

specialized training for special employment opportunities; short courses; adult literacy programs; family life education; recreational activities; public affairs education; and joint planning and research.

Organizing for Community Services

A successful community services program requires planning and coordination. This over-all planning and coordination can be accomplished by a community services advisory council. On this council will be representatives of the community and of the faculty. Any community service must be approved by this council prior to adoption by the college. Working as subordinate committees might be an adult education committee and a business committee. As the college develops and grows in size, the establishment of a recreational advisory committee and a public affairs education committee may be in order. During the early years of operation, the community services advisory council will perform the duties that would ordinarily be assigned to the latter two committees.

Many of the sponsored programs will be of little or no expense to the college. Some programs may be held in non-college buildings. Some programs will require financing, and in such cases the college officials should be consulted regarding fees and other expenses. The college will not be able to spend tax money on non-credit programs and will need to work out ways and means of financing essential community services.

Kinds of Community Services

Adult Education. Several types of adult education programs may be advisable. Some courses will be vocational in nature and provide training for technical fields. Other non-credit courses may be offered in such fields as income tax preparation, learning to read English; learning to speak English, child development, food and nutrition, clothing preparation, consumer buying, home furnishings and decoration and the political organization of the tribe, Bureau of Indian Affairs and the state.

Recreational Activities. The community college may aid in the planning and development of recreational programs for the communities of the Navajo Reservation. In addition, the college may provide opportunities for the public to engage in recreational opportunities such as watching athletic contests, attending band or choral concerts, attending school plays, and using school facilities for volleyball, basketball, baseball and other types of recreation. The advisory council may wish to make travel films available for use in the chapter house meetings.

Public Affairs Education. The function of this type of education is really a form of adult education, however, the emphasis is on the welfare of the community rather than the individual. Tribal problems and issues might be debated in a public forum, or discussed by informed speakers or by people in attendance. The purpose would be to inform citizens of problems facing them and to help provide avenues for solution.

Community Services Media

Speakers. The college should maintain a speaker's bureau, maintaining a list of people on the faculty and in the community who are willing to talk on a subject in which they are knowledgeable. Speakers might be used in chapter meetings and public forums at the college. People may be secured for panel discussions, forums, and debates.

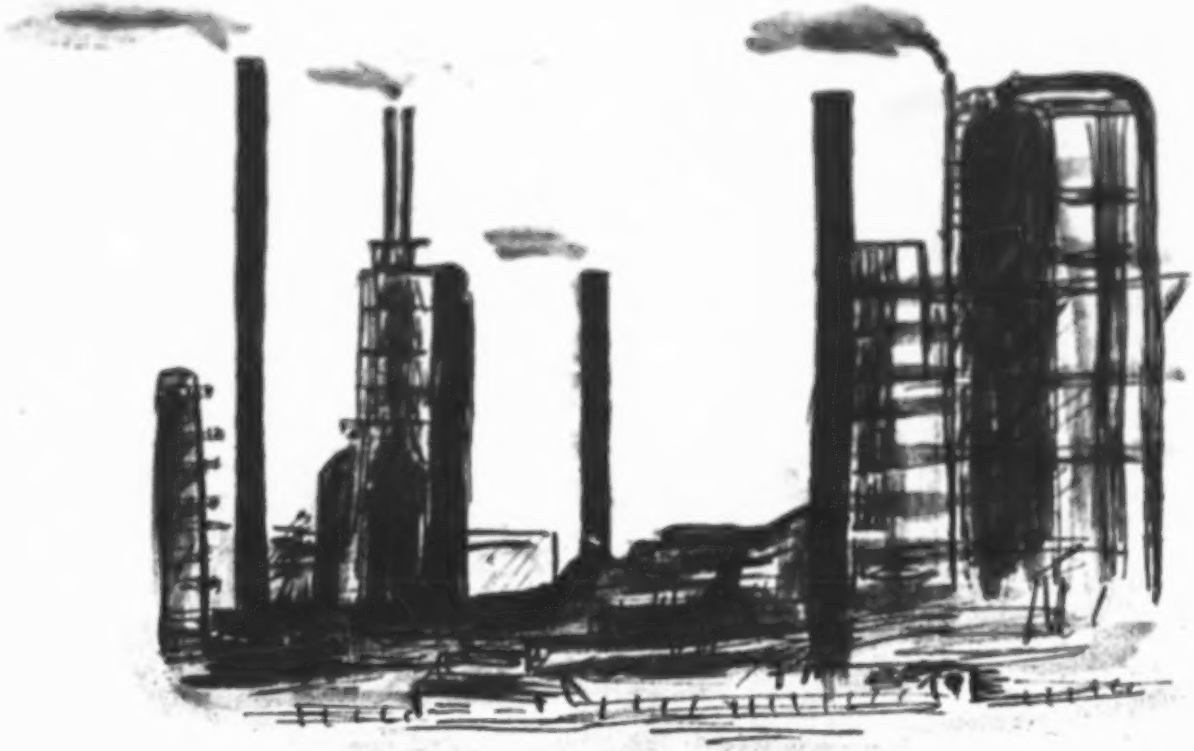
Educational Radio and Television. Perhaps no other media offers greater potential for community service than a college operated radio station. With radio sets becoming a universal fixture in the Navajo home, radio provides an almost unlimited opportunity for educational, cultural and informational advances. If the college secures an educational television station, many programs are available through National Education Television. When more television sets are available on the reservation, this medium will provide one of the best opportunities for public information and educational services.

Newspaper. The college journalism staff will undoubtedly create a campus newspaper. This can be circulated widely in order to keep people informed about events sponsored by the school. The students may contribute to the *Navajo Times*, obtaining wider circulation for their stories.

Student Work. Many of the educational programs that will develop, along with many work-study opportunities, will provide direct services to the community. Some students will be working with the Bureau of Indian Affairs and public school teachers, aiding them in providing instruction to pupils under their care. Students majoring in building construction may build houses and buildings for the tribal council. Students learning to operate the heavy road equipment may build roads on the reservation. Students learning to be cooks and bakers may work in established food service institutions and thus provide a service to the community while learning. Student nurses will assist in hospital activities while learning. Many other opportunities to serve the community will evolve from the educational programs as they are established.

1/f = 1/P + 1/Q   f = PQ/P+Q

ADULT IN-SERVICE TRAINING



CHAPTER VII

THE PHYSICAL PLANT

I. INTRODUCTION

The physical plant refers to the school site, the buildings, furniture, equipment and site improvements. The physical plant should facilitate instruction and learning. The buildings and grounds should be attractive so that people will take pride in the school. Buildings should blend into the physical setting and should not be strikingly different than other buildings or the landscape on which they are placed. Buildings and setting should harmonize.

II. THE COLLEGE SITE

Desirable Characteristics

A desirable community college site is dependent on the following factors: location, size, topography, soil condition, accessibility, cost and environment. Each will be discussed briefly.

Location. The college should be located so as to accommodate the greatest number of students. In addition it must be located so that community resources can be utilized in the instructional program. Many other factors must be considered in selecting the location. Insofar as possible, the site should have desirable community services available. Among these services are the following: gas, electricity, roads, telephone, domestic water, garbage collection, fire protection, police protection, sewage disposal, hospitals and zoning. The cost of extending utilities to the site must be given consideration in the selection process.

Size. The college site must be large enough to provide for spacious placement of buildings. To provide for the anticipated number of students, the Navajo Community College site should include 100 acres. This does not include the land necessary for a dairy, poultry ranch or college farm. The dairy and poultry operation may be close to the campus and the farm may be at some distance. The dairy site should be a minimum of 20 acres, assuming that feed will not be grown on the site. The poultry operation will require at least 10 acres. The farming operation should be much more extensive. The equivalent of one section of land (640 acres) would be desirable at the outset. If the college farm supplies food for its food service operation, farm land should be increased. If fruit orchards and vegetable fields are utilized, consideration must be given to orchard size. It is expected that feed crops will be grown on the farm to provide food for the poultry, dairy cows and other farm animals.

Topography. The topography of the school site is important from the standpoint of drainage, possible development of the campus and suitability of buildings to the terrain. Land that has too much fall is not desirable because the development of the site will change the patterns of drainage and washes may develop. Mountainous sites generally result in excessive building costs. The land should be such that roads can be developed without excessive costs.

Soil Condition. The composition of the soil is important to the general appearance of the site. Grass, trees, flowers, and shrubs help to make a campus attractive. The soil must be able to support the buildings. Footings and foundations must rest on solid ground and not on a bog or shifting sand.

Accessibility. The campus should be accessible to students. However, there is no location on the reservation that is reasonably close to a large number of potential students. Accessibility must be considered from the standpoint of transportation. The most common type of transportation is the motor vehicle, thus roads are important. The availability of an airport and a railroad terminal is also important. Faculty housing should be close to the campus. If desirable private living quarters for the faculty are not found in nearby communities, it may be necessary to build such housing. This may be financed by revenue bonds.

Cost. The cost of a site is dependent on several factors: initial cost, improvement costs, cost of extending utilities to the site, and transportation costs to off-campus students and faculty to get to and from the site daily. It is assumed that the tribal council can make an adequate site available to the college at a token rate, perhaps $1 per year. The cost of site improvements will depend on the nature of the soil and the terrain. The cost of water, sewer and gas utility extensions will depend on distance from available facilities. Consideration must be given to the distance from garbage collection, police protection and fire protection.

Environment. The school site should be located so that there is an absence of noise from busy highways, factories, airports, and other objectionable sources.

The air at the campus should not be contaminated by smoke from a trash burning operation. The air should not contain smoke, dust or obnoxious odors.

Another consideration in locating a site is the beauty of the surroundings. The most beautiful are the natural surroundings, mountains, desert or plains. Zoning ordinances should prevent marring of the beauty at the campus site.

A campus should not be located adjacent to undesirable places of business.

III. BUILDINGS

Introduction

The buildings needed for a community college campus will probably include the following types: regular classrooms, shops, laboratories, offices, student housing, maintenance shops, storage and garages. Faculty housing may be required. The number of each will depend on the enrollment and the kinds of educational programs offered. One course, such as General Inorganic Chemistry, may be taught in any one of several ways. Extensive laboratories are very expensive and research findings do not support their superiority over lecture-demonstration procedures with limited laboratories. A third type of instruction, utilizing individual instructional spaces and teaching machines, provides quality instruction in a smaller space.

The determination of building needs, both classroom and shop, should await the employment of personnel who will assist in the planning. However, for the benefit of projecting costs and approximate building schedule, estimates will be used. The nature of the instructional program will determine the buildings and equipment needed to facilitate the program. Many helpful suggestions have been offered by the consultants who have worked on this project. They are being preserved for administrative personnel.

Another factor in financing campus buildings is the prohibition to spending district tax money or state financial assistance for certain kinds of buildings. Faculty and student housing cannot be financed by the same revenues used to finance classrooms and other instructional buildings. Neither can student centers or stadia be financed with tax funds. All of these types of building must be self-financed through student fees and rents. The federal government makes funds available on a long-term basis for student housing and student centers.

Kinds of Facilities Needed

Only the building requirements for the first phase of construction will be described at this time. Requirements for additional space should be jointly planned by faculty and administration in future years. It is assumed that the following subject areas will be offered in the transfer programs: English, art, biology, chemistry, physics, social studies, behavioral sciences, business subjects, music, physical education, data processing and Spanish. The occupational programs may include: agriculture, automotive mechanics, auto body and fender work, building construction, business areas, cooking and baking, heavy equipment operation, home economics, nursing and distributive education, and police science.

Regular Classroom. To accommodate the expected enrollment for the first and second years, ten regular classrooms, each about 800 square feet in size, will be needed. Each should be equipped with darkening curtains to make the use of audio-visual aids possible. Some rooms should be equipped with tables and chairs, others with tablet-arm chair-desks. Rooms will be used for academic subjects and will be used by several teachers.

Large Classrooms. Two large classrooms, each capable of seating 200 students should be provided. One will be in the science area and the other in the social studies area. Each will have seats that are elevated so that students will have a good view of the instructor and also a good view of visual aids that are used. Seating is best if it can be arranged in semi-circular form, each row being elevated slightly higher than the row immediately in front. These rooms will be used for large-class instruction. In many class groups, additional instruction will take place in smaller groups at other times during the week.

Faculty Offices. Faculty offices should be provided in various areas of the campus. Offices can be grouped so that faculty members teaching in the same subject area will have offices in the same suite. A suite should consist of no more than eight offices and reception room-secretarial space.

Educational Service Space. Space for the offices of college administrators should be located conveniently to persons coming to the campus. The executive dean and his assistants (deans) should be located in the educational services building. They must work closely together on many problems and procedures. After the college reaches 1,000 day-time students the space will need to be increased. Initial buildings should be designed so that space will be available when needed. Part of the initial space might be used for classrooms or storage until such time as needed.

Art Rooms. Two general art rooms will be needed. During the early years, other classes may meet in both rooms until such time that all available time will be used for art. One room should have one small room adjacent that can be used for sculpturing and kilns. Good lighting is needed for both rooms. Each room should have ample bulletin boards and one or two chalk boards.

Typewriting Room. The typewriting rooms should have electrical outlets to accommodate electric typewriters. The room can be outfitted with as many stations as will be needed. During the early years, the demands will not justify a large room that will be utilized to a small extent. But expandable space next to the typing room makes it possible to increase the size as the needs arise. Typing can be successfully taught in large groups, in groups of 60 or more.

Biological Science. A multi-purpose biology room can be used for several of the biology courses. It must have suitable laboratory equipment. If sinks are arranged around the wall space, the center of the room provides good instructional space for other courses. A specimens room, an animal room and "hot-house" room are good features.

Chemistry Room. One chemistry room equipped with laboratory desks is needed. This can be a multi-purpose room similar to the biology room. With equipment placed around the perimeter the center space can be used for regular classroom or study. Two storage rooms are needed, one for glassware and other equipment, the other for chemical storage. This latter room should have a good exhaust system so that chemical fumes will not creep into the other rooms and corrode metal equipment.

Physics Room. This laboratory can be used for earth sciences as well as physics and electricity. The rooms should be equipped with tables and chairs. A few sinks should be next to the walls. At least two storage rooms will be needed in connection with this instructional space.

Home Economics. One large room can be used for home economics classes. Movable kitchens can be brought in from nearby storage when they are needed. Flexibility should be the adjective used to describe this space.

Instructional Materials Center. This space will be the learning center of the campus. It will house books, film, tapes, records, slides and magazines. The space for storage of projectors should be adjacent to the library space. All instructional aids should be catalogued and made available to faculty and students. This space should be near the center of the instructional area of the campus.

Music Rooms. One large instructional space is needed at the outset. This can be used for both vocal and instrumental work. However, the over-all plans should provide for the addition of another large room as needs require. Other rooms needed are: office, library, instrument repair room, uniform storage space, about six practice rooms and a small recording room.

Agriculture Rooms. A multi-purpose classroom with about 1200 square feet of floor space, combined with storage, should be adequate for the regular class work and small amount of laboratory work. A workbench with sinks on one side of the room will provide laboratory space. In addition, a farm shop with about 3,600 square feet of floor space is needed. This shop will be equipped with chain hoists, engine stands, welding and other equipment, and will have adjacent tool and storage room. For production agriculture, the following are needed: poultry house equipped with a cold storage room and an egg handling room; a dairy barn equipped with a milking parlor, milk storage tanks, and a dairy products laboratory with facilities for making cheese, ice cream, butter, and grade A pasteurized milk, a small greenhouse (15' x 30') for plant propagation for instructional purposes during the winter months; and a livestock barn to accommodate beef animals, sheep, goats and swine with necessary feed handling facilities.

Automotive Mechanics. An automotive laboratory, approximately 40' x 80' in size, will serve as the initial instructional space for automotive mechanics, body and repair, and heavy equipment operation. Adjacent to the room should be an exterior, paved, fenced area of equal size. Provisions should be made to add two more shops of this size as needs demand. This must be given consideration in the long-range campus planning.

Building Construction. The needs for architectural drafting may be served by the same facility required for technical drafting if the proper table selection is made initially. A machine-woods laboratory of approximately 40' x 60', with lumber storage room, a finishing room and a project storage room are required. Each of these three small rooms should be about 400 square feet in size. An adjacent outdoor instructional area, with about 4,000 square feet of space, will also be needed in connection with the masonry, framing, plumbing, etc. Eventually, at least three shops will be needed for building construction classes.

Cooking and Baking. Space for instruction in institutional foods can be in conjunction with a school cafeteria and located in the student center. This facility can feed daytime students, teachers and students from the dormitories. This instructional space will be adequate to teach food preparation, including meats, vegetables, bakery products, salads, and other foods commonly served in food service establishments. The students can prepare food for the cafeteria operation and can supply bakery products to the individual dormitories. The cooking in the dormitories will be designed for family operations whereas the cooking and baking will be for institutional service.

Distributive Education. A classroom with about 2,000 square feet of space is needed. Included in the space should be counters, display cabinets, cash register stand, storage, workshop area, office and library.

Drafting. A drafting room of approximately 1,600 square feet of space to accommodate 30 stations of drafting tables and drafting machines is required. An auxiliary print reproduction room of approximately 250 square feet is also necessary.

Physical Education Laboratory. A gymnasium with about 17,400 square feet of space will be required at the outset. This space will include play courts, spectator space, classroom, men's lockers and showers, women's lockers and showers, offices, equipment drying room and equipment storage rooms. An additional 6,000 square feet of space will be required when school engages in interscholastic sports programs.

Police Science. A regular classroom with about 1,200 square feet of space is required. Built-in cabinets are needed to store items used in the instructional program.

TABLE X

BUILDING REQUIREMENTS FOR FIRST TWO YEARS OF OPERATION
(700 Students)

Type of Facility	Number	Unit Size	Total Square Feet
Educational Service Space:			(5,000)
Executive Dean's Office	1	240	240
Dean's Secretary	1	160	160
Dean of Business Services	1	180	180
Business Office	1	500	500
Machine Room	1	120	120
Dean of Instructional Services	1	180	180
Clerical Space	1	260	260
Dean of Student Services	1	180	180
Clerical Space	1	500	500
Counselor's Offices	5	100	500
Lobby-Receptionist	1	500	500
Guidance-Receptionist	1	400	400
Fireproof Vaults	2	240	480
Supply Storage	1	300	300
Conference Room	1	500	500
Regular Classrooms	10	800	(8,000)
Large Classrooms	2	1,600	(3,200)
Faculty Space			(5,920)
Faculty Offices	40	100	4,000
Reception Rooms	8	240	1,920
Instructional Materials Center:			(11,000)
Library Space	1	9,000	9,000
A-V Space	1	2,000	2,000
Science Laboratories:			(5,400)
Biology	1	1,800	1,800
Chemistry	1	1,800	1,800
Physics - Earth Science	1	1,800	1,800
Fine Arts:			(5,400)
Music	1	2,400	2,400
Art	2	1,500	3,000
Occupational Programs:			(24,000)
Agriculture Shop	1	2,400	2,400
Agriculture Classroom	1	600	600
Auto Mechanics Shop	1	3,400	3,400
Auto Mechanics Classroom	1	600	600

TABLE X. (CONT'D)

Type of Facility	Number	Unit Size	Total Square Feet
Building Construction	1	3,000	3,000
Cooking & Baking	1	3,000	3,000
Typing Room	1	1,200	1,200
Machine Room	1	1,200	1,200
Home Economics	1	1,600	1,600
Police Science	1	1,200	1,200
Distributive Education	1	2,000	2,000
Drafting Room	1	1,800	1,800
Physical Education:			(17,400)
Large Play Court	1	1,200	1,200
Showers & Lockers	2	2,200	4,400
Classroom	1	1,000	1,000
Student Center:			(8,000)
Dining Room	1	3,000	3,000
Bookstore	1	1,800	1,800
Snack Bar	1	200	200
Student Offices	1	400	400
Publications	1	400	400
Directors Office	1	200	200
Lobby-Lounge	1	2,000	2,000
Dormitories:			
First Year	20	4,160	(83,200)
Second Year	16	4,160	(58,560)
Maintenance and Storage:			(4,000)
Building Requirements: (toilets, janitor closets, partitions, equipment rooms, hallways, etc.) = 20% of total (exclusive of Dormitories and maintenance).			(18,664)
	Total Requirements		197,184

Dormitories. Small dormitories to accommodate twelve men, twelve women, and one family are recommended. These can be small enough so that occupants learn to live together. Each dormitory may have three wings. One wing with about 1,000 square feet of space will be used by the family who is head resident. Each of the other two wings will have about 1,200 square feet of floor space. One will house eight or ten young men; the other the same number of young women. A common kitchen-living room will require another 780 square feet of space.

Student Center. This facility will contain the bookstore, offices for student body government officials, snack bar, lounge, dining room-kitchen, toilets and publications. Some of this space, along with dormitories, will have to be provided with money other than bond funds. Much of the space is instructional in nature and is a legitimate expense to the district tax funds.

Summary of Building Needs

Table X lists the square footage requirements of the buildings that will be needed for the first two years. These figures are approximate, detailed planning by school officials will modify them somewhat. However, these can be used as a basis for determination of building costs and for the projection of resources needed to finance their construction.

CHAPTER VIII

LEGAL AND FINANCIAL CONSIDERATIONS

I. INTRODUCTION

The location of a community college on the Navajo Indian Reservation is dependent on many factors including the important consideration of legality and financial possibility. A Navajo Community College that will serve the greatest number of Navajo youth is an ideal. Such a college should serve youth who can not be served by existing junior colleges. Inasmuch as Navajo youth in New Mexico live reasonably close to two existing branch colleges, it appears that a community college in Arizona might best serve the reservation. This supposition is predicated on the enlargement of educational offerings at both New Mexico institutions as well as closer cooperation with the Navajo tribe to make additional educational opportunities available to Navajo and other youth. The branch colleges located in Farmington and Gallup, by the addition of occupational programs, could be very valuable to the Navajo youth.

Legal, financial, geographical and political factors must be given consideration. Only small numbers of Navajos live in Utah. Colorado has been generous in making facilities at Ft. Lewis available to the Navajos at no tuition cost. It then appears that the laws of Arizona and New Mexico should be examined as they relate to possible location of the college site. Arizona laws provide for four types of junior college districts, whereas New Mexico laws provide for three types of post-high school institutions other than four-year colleges and universities.

II. ARIZONA

Legal Factors

District Junior College. Arizona Revised Statutes (ARS) 15-601 make it possible for a high school district, or union high school district, to offer subjects in grades 13 and 14 if it is deemed advisable by the board of education of such district. The district must have a high school average daily attendance (ADA) of 100 or more and the district must have an assessed valuation of $5,000,000 or more. (Information in this section, Arizona Revised Statutes).

Union Junior College District. ARS 15-611 permits two or more contiguous high school districts, by a vote of the electorate, to organize a union junior college district if the total high school ADA for the preceding year was 200 or more and if the assessed valuation was at least $5,000,000.

County Junior College Districts. ARS 15-611 provides legislation that permits a county, embracing all territory not otherwise in a junior college district, to organize a county junior college district if the territory involved has a high school ADA of 200 or more and an assessed valuation of $5,000,000 or more. This can be accomplished by a vote of the electorate.

State System Junior College. ARS 15-666 makes provision for an entire county, or two or more contiguous counties, to form a junior college district as a part of the state system. This can be accomplished by a favorable vote of the electorate in all counties concerned. The territory to be in the junior college district must have an assessed valuation of $60,000,000 or more and a potential student body of not less than 320. The number of potential students is determined by taking forty per cent of the previous two years' high school graduating classes. Such a proposed district must petition the State Board of Directors of Junior Colleges. The board will have a survey made to determine the qualifications. If each county voting favors the organization, the legislature has the authority to establish the junior college district and the individual junior college or colleges within the district.

Finance Factors

State System Junior College District. The Arizona Legislature provides 50 per cent of the initial $1,000,000 building cost of an approved state system junior college. In addition, each year the college will receive $115 per full-time student equivalent (FTSE). Fifteen-semester-hour-enrollment equals one FTSE. The district may bond itself, by a vote of the qualified electors, to an extent not to exceed 10 per cent of the assessed valuation of the district. The principal and interest on such bonds can be paid from revenue received from the state. The state will assist in financing the operational costs to the extend of $525 per FTSE for the first 1,000 students, and will provide $350 per FTSE for all over the first 1,000. This type of junior college district must maintain, after the first two years of operation, an enrollment of at least 320 FTSE in order to continue receiving state funds.

Other Arizona Junior College Districts. At the time this report was written, there were no other types of junior college districts existing in Arizona, only those belonging to the state system. The primary reason for this is very understandable in view of the financial considerations. Any of the other three types provided by law must finance the entire cost of capital outlay, and must provide the entire cost of the first two years of operation. If at the end of the second year of operation the district has suitable facilities, and if courses are approved by the University of Arizona, the state will provide $150,000 per year, upon application. The maximum amount of money that one of these districts could receive under state laws, for any number of students, is $150,000 per year. Under the state system, a junior college district with 1,000 students can receive $640,000 per year. For each student in excess of 1,000, the amount that is received is $465 ($350 + $115).

Geographical and Political Factors

Location of a Navajo Community College. A college of this nature should be located in a county in which a large number of Navajo live. The 1960 Census gives the Indian population of the Arizona counties as (1) Apache 22,814; (2) Coconino, 11,668; and (3) Navajo, 19,324 (Valley National Bank Research Department, 1964, p.12). The Valley National Bank projected the Indian population for each of the respective counties for 1964 as (1) 25,000, (2) 12,500, and (3) 21,000. Approximately 5,000 Hopi Indians are included in the totals for Coconino and Navajo Counties, most of whom live in Coconino County.

Population growth is another factor to consider in locating a community college for the Navajos. Judging from the increases in school attendance of elementary school pupils, the growth rate averaged a little over eight per cent in Apache County each year during the four year period from July, 1960, to July, 1964. The rate of growth in Navajo County was only a little over three per cent each year during the same period of time. During this same period few, communities in Apache County, other than those on the reservation, experienced rapid growth. In Navajo County, both Holbrook and Show Low, neither on the reservation, experienced rapid growth. This leads to the conclusion that the Navajo population is growing more rapidly in Apache County than in Navajo County. Inasmuch as the total number of Navajos in Apache County exceeds the number in Navajo County, and are growing at a more rapid rate, it seems logical to give first consideration to Apache County as the proper location of a Navajo Community College if only one can be established. Residence centers or extension centers would be needed in many communities on the reservation.

Other factors that must be given consideration are the legal aspects already identified but not analyzed. Coconino County is the only county, among the three that contain part of the Navajo Reservation, that has sufficient assessed valuation to qualify for a district under the state system of junior colleges. However, there seems to be little interest in another college for Coconino County. The state college at Flagstaff has served the inhabitants well. Even if the county established a junior college, it is highly unlikely that it would be placed on the Navajo Reservation because the total number of Navajo Indians constitute only about 15 per cent of the population of the county. More than 50 per cent of the people of the county live in the immediate trade area of Flagstaff.

Neither Apache County nor Navajo County has sufficient assessed valuation to qualify for a junior college district under the state system. Each has a sufficient number of high school graduates to qualify. These two counties have given considerable attention to the possibility of forming a district under the state system by including both counties within the district. To date there has not been sufficient agreement to accomplish the task. Navajo Tribal officials should invite representatives of both counties to give additional consideration to this possibility and try to secure agreement for establishing a campus on the reservation as well as one somewhere else within the counties. If this can not be accomplished, the next best thing is to encourage an existing junior college district to establish a branch on the reservation. In either event the official governing board will probably not be an all-Navajo board. This is not essential. However, to be an effective community college, there should be an advisory board, mostly Navajo, who will give guidance and assistance to the college officials and governing board.

The location of a Navajo Community College, irrespective of how it is governed, would best serve the Navajo people if it is located in Apache County, somewhere in the Window Rock-Ft. Defiance area. More Navajos live in this area than in any comparable area of the reservation and the location of Tribal offices and enterprises as well as United State Government operations, make this a logical location. Sufficient land for a school farm and school garden is available. However, a larger farm located within a hundred miles might serve adequately. During the 180 days during the growing season the students could spend full time on the farm; during the remainder of the year they could study related programs.

III. NEW MEXICO

Legal Factors

Branch Community College. The branch community college (New Mexico Statutes Annotated 73-30-18) is organized at the request of the local school board. It may include more than one school district. The board selects the state institution of higher education that it wishes to establish the branch community college and enters into an agreement with the college or university. The State Board of Educational Finance must approve the establishment of the branch. The branch can offer only the courses approved for the parent campus (Information in this section, New Mexico Statutes).

Independent Junior College District. N.M.S.A. 73-33-1 makes provisions for the establishment of a junior college district that encompasses one or more contiguous school districts. Formation is subject to the approval of the electorate. The State Board of Education must approve suitability of the geographical boundaries, the fact that the college will have at least 250 full-time student equivalents (16 semester hours constitutes one student) and have financial ability. No criteria for financial ability are established in the law. This law was enacted in 1963.

Technical and Vocational Institute District. N.M.S.A. 73-34-1 makes provision for the establishment of technical and vocational institute districts. Such districts must have boundaries coterminous with a single high school district or two or more contiguous districts. The State Board of Education will require a survey to prove suitability of boundaries, adequate school population (200 full-time student equivalents, an equivalent being 12 hours of work) and adequate financial ability. This legislation was enacted in 1965.

Finance Factors

Branch Community College. The branch community college must be operated in school-district-owned buildings. Effective in 1965, the local school district, by a favorable vote of the electorate, can bond the district in an amount not in excess of three per cent of the assessed valuation of the district for community college facilities. Operational funds are obtained from three sources: (1) student tuition in an amount not greater than $240 per year, (2) local tax levy not to exceed yield of $100 per student per year and (3) state aid not in excess of $300 per full-time student equivalent.

Independent Junior College District. This type of district receives no money from the state. It must be financed by student tuition and from local taxes. Buildings can be constructed by bonding the district upon vote of qualified electors, in an amount not in excess of three per cent of the assessed valuation of the district.

Technical and Vocational Institute District. This type of district can bond itself, by vote of the qualified electors, not in excess of two per cent of the assessed valuation of the district, for buildings. The entire operating costs must come from student tuition and the local tax levy. State aid is specifically prohibited.

Geographical and Political Factors

Inasmuch as two communities near the reservation, Farmington and Gallup, both have branch colleges, and both communities have manifested more than a casual degree of interest in a junior college program that will have heavy emphasis on the occupational programs, it seems logical that the Navajo Tribe cooperate with both communities in establishing institutions that will serve the Navajos as well as the non-Navajos. Many of the residents of McKinley County (Gallup) are Navajos and are entitled to participate in the branch college in Gallup. With improved junior colleges, the Navajo youth would still have the same opportunities. However, unless New Mexico laws are changed in order to provide more adequate state financing of junior colleges, it will be difficult for the communities to provide adequate programs. It appears that even with increased state financial assistance the legislature will insist on student tuition. The current rate is about $240 per year for each full-time student. In this event it may be necessary for the Navajo Scholarship Committee to provide financial assistance for most Navajo students.

The Farmington Chamber of Commerce published a "White Paper". It explains why the people should establish an independent junior college district in San Juan County. The first recommendation of the report is "That a public junior college be established in San Juan County under provisions of the 1963 New Mexico Junior College

Act". (Farmington Chamber of Commerce, p. 23). A very high percentage of the Navajo Indians in the state of New Mexico now live in either San Juan County or in McKinley County. The interest of the citizens of these two counties is such that further efforts will be made to establish independent junior college districts. The Navajo Tribal Education Committee should work closely with the proper authorities to help bring into existence institutions that can and will offer more occupational programs. The recommendations in this survey report, as they relate to educational programs and some portions of the finance, are applicable to such institutions in New Mexico as well as the proposed Navajo Community College.

IV. FINANCING COMMUNITY COLLEGES FOR NAVAJOS

General

The methods to finance the two community colleges located at Gallup and Farmington are clearly described in New Mexico Statutes. These have been identified. If either or both communities expand their educational offerings and offer to enter into agreements with the Navajo Tribe to educate Navajo youth, it can be done. The Navajo youth would need housing and food near campus. Practically all the Navajo students can qualify for the Economic Opportunity Work-Study programs and can earn enough money to pay for food and lodging. The yearly tuition of approximately $240 per student would need to be paid by the Navajo Scholarship Committee. But this nominal amount for tuition is considerably less than the present cost to the committee to send each student to college. This cost averaged $1,350 per student for the school year 1964-65. It is anticipated that the state of New Mexico will have increased demands for more adequate state financing of junior colleges. The national trend has been for increased state financial assistance, primarily because occupational education programs are badly needed and because the first two years of a four-year program can be more economical to the state and to the student if obtained in a two-year institution.

The establishment of a Navajo Community College in Arizona will require a combination of finance by the State of Arizona, by district taxation, by tuition fees, by federal assistance, and by tribal funds. If the college is legally approved for the reservation an agreement to use money generated by the college should be determined so that such money could be used for the operation and development of the institution. If the college is not a part of a regularly established district, but is a branch of another junior college, the Navajo Tribe will have to assume an even greater share of the financing. If it is one college within an Apache-Navajo County District the major share of tribal financing will probably go toward student finance.

In financing a junior college program for Navajos, in Arizona or in New Mexico, two things seem to be very important. First, all eligible Navajo students should work in the work-study programs and earn money to pay board and room. Tribal money and federal funds can be used to stimulate this type of education. Second, tribal scholarship funds should not be used exclusively to send students away from the reservation. Some of these funds will be needed to help with student finance in junior colleges and some may be needed to help with the operational and building programs if proper legal approval for Navajo Community College is not forthcoming.

The Navajo Scholarship Committee should give serious consideration to requiring all Navajo students who can qualify for the work-study programs, either in Navajo Community College, or at an off-reservation institution, to work for part of his board and room. The work-study is an integral part of education. The number who will want to leave the reservation for higher education will decline. However, those selected should be capable of success and should demonstrate the kind of desire that results in success. With the ever-increasing numbers of Navajo youth, now almost 7,000 in the two-year junior college age group, it will be necessary to use available funds to benefit the greatest number of students possible, certainly more than the 500 who attended college during the past year by virtue of Navajo scholarships.

Financing Navajo Community College in Arizona

Operational Finance. The cost of operating a community college that has a strong vocational-technical program will be somewhat greater than a typical two-year college in the United States. As the size increases the per capital cost will decrease somewhat. Operational costs include salaries for administrators, teachers, librarians, guidance personnel, secretaries, clerks, custodians, maintenance men, bus drivers, and other personnel. Costs of utilities, including water, gas, electricity, telephone are also operational costs, as are costs of supplies, repairs, painting, and the like. Each junior college district in the Arizona system of junior colleges received $525 per student for the first 1,000 students and $350 per student for all above that number. For educating students who live in a county that does not have a junior college district the college receives $225 per year county tuition to educate such students. For out-of-state students the yearly tuition is $600. The latter two types of tuition are determined by the State Board of Directors for Junior Colleges.

Some of the operational costs are paid in part through federal funds. These include salaries for certain vocational courses and salaries for guidance personnel. Some California junior colleges receive funds for educating Indian pupils who are not residents of the district. These funds are provided under provisions of PL 874. California considers junior colleges as a part of the secondary school system for federal financing programs. Such funds may not be available in Arizona, however, such should be investigated.

Money to provide jobs for students under work-study programs would need to be provided by the Navajo Tribe and the federal government. Two federal government programs provide such funds, one through the Office of Economic Opportunity, the other under the Vocational Education Act. Each requires that a local agency provide 10 per cent of funds needed. Each will require a higher percentage in years ahead.

To secure operational funds that are needed in excess of those already described, it is necessary for a district to levy a property tax to secure the balance needed. Junior college district tax rates in Arizona have been reasonable and the tax rates for an Apache-Navajo County District should not be excessive.

It is recommended that officials apply for at least $100,000 from a foundation to help get the college off to a good start. Such money could be used to pay the salaries of the administrative head and his secretary, travel, and for consultants to come to the college at various times during the first three years to give counsel and help. Many foundations are favorably impressed with efforts of a group to help themselves and are willing to provide incentive money during the developmental stages.

Capital Outlay Costs. If Navajo Community College is a legally approved college under Apache-Navajo County District, the amount of money generated by student attendance will be almost enough to pay bond interest and principal on an amount large enough to build facilities as needed. Certain of the facilities must be financed by other funds. Included in the latter category are dormitories, faculty housing, student centers, and stadia. Rent charged for dormitories should finance such buildings. The same would be true for faculty housing if such is needed. Profits from bookstores, athletics, and other locally generated funds can be used to finance a student center. It is not recommended that any consideration be given to the construction of a stadium for many years. The state provides $115 per student each year for capital outlay purposes. This can be used to retire bonded indebtedness or to purchase equipment.

Additional sources of funds may be sought from the federal government or tribe. Federal funds for buildings are available under the Vocational Education Act of 1963 and the Higher Education Facilities Act of 1965.

Funds for equipment are also available from several Federal Acts. Equipment for science laboratories, language laboratories, library books, guidance equipment, and planetariums are available through the National Defense Education Act. Some money may be made available by diverting some of the revenues from the investment of the scholarship money to build on a pay-as-you-go basis. The other possibility would be for the tribe to borrow funds and pay back principal and interest over a 20-year period. Debt service money could come from the $400,000 yearly income from investment of scholarship funds or from rental of the buildings to the junior college district.

If the community college buildings are built with student labor, in work-study programs, it might be possible to reduce the costs so that $2 worth of buildings will be secured for each $1 spent. The values of the learning experience is inestimable.

It is anticipated that the site could be made available to a Navajo Community College at no cost, or at least a small yearly rental.

It is anticipated that dormitories can be built with borrowed funds and the indebtedness paid off over a period of time from the rental revenue received. "No-strings-attached funds" should be sought so that student labor might be used in construction. The possibility of investing some of the scholarship capital funds might be explored. Good management of dormitories should yield interest sufficient to justify the investment. Over a period of 20 years, the principal can be repaid.

Student Financial Needs

Tuition. Tuition and registration fees, to a great extent, are being financed by the tribal scholarship committee. For Navajo youth who will attend a community college in New Mexico, it is expected that the tuition would have to be paid by the tribe for most of the students. The same would be true for Navajo students attending any college in any state. Efforts have been made to make it possible for students to work during the summer months to earn some of the funds that will be needed. This is a very commendable program and it should be continued.

Board and Room. Most of the Navajo students, because of distance of home from any college, would have to live in dormitories or suitable housing. Board and room at some colleges amounts to as much as $90 per month. At Navajo Community College, an effort should be made to keep the cost within the earning power to students working on the work-study program, or $18.75 per week. This can be accomplished. Students should be required to work for two reasons; money is scarce and is needed badly, and the work experience is a valuable educational experience which is a part of the total education that a community college can offer.

Incidental Expenditures. Students will need to earn enough money for books, supplies, clothing, and personal care. Summer work programs should be provided, if possible.

V. NAVAJO COMMUNITY COLLEGE COSTS

District's Financial Requirement for Physical Plant. A summary list of building requirements for the first two years is as follows:

Educational Service Space	5,000	sq. ft.
10 Regular Classrooms	8,000	" "
2 Large Lecture Rooms	3,200	" "
Faculty Space	5,920	" "
Instructional Materials Center	11,000	" "
Science Laboratories	5,400	" "
Fine Arts	5,400	" "
Occupational Programs	24,000	" "
Physical Education	17,400	" "
Maintenance (4,000 ft. @ ½ cost)	2,000	" "
Auxiliary Building Requirements, 20% of total space	17,464	" "
Total	104,784	sq. ft.

Assumptions:

(1) Building cost @ $15.00/sq. ft.

(2) Equipment cost @ 20% of building cost or $3.00/sq. ft.

(3) Total cost @ $18.00/sq. ft.

Total Needs:	104,784 x $18.00/sq. ft. =	$1,886,112
	Less State grant	500,000
	Less Federal grants for occupational program space @ ½ total or 12,000 @ $18.00/sq. ft.	216,000
	Less Federal NDEA funds to equip science and language labs.	170,112
Local Funds Needed		$1,000,000

Debt Service (20 years on 3½% interest bonds) = $69,600/yr.

__Ability to Finance Capital Outlay__. The ability of a junior college district to finance buildings and equipment depends on the total cost of the school plant, revenues that come from federal and state sources, and the assessed valuation of the district. In a joint-county district the debt service is prorated between the counties on the basis of the assessed valuations at the time the bond issue is approved. This means that the tax rates in each county will be approximately the same at the outset to retire the bonds. The assessed valuations for each county and the totals for both, are indicated in Table XI for the past five years, as well as projected assessed valuations for the next seven years. Projections are based on growth factors that have been present within recent years and anticipated current growth in the years ahead. Revenues for bond redemption are indicated in Table XII along with expected tax rates. Projected tax rates in the counties would be doubled if two colleges were built.

TABLE XI

ACTUAL AND PROJECTED ASSESSED VALUATION OF APACHE AND NAVAJO COUNTIES, 1961-1972

Actual	Apache County	Navajo County	Total
1961	$21,121,492	$30,125,030	$51,246,522
1962	21,267,809	41,368,512	62,636,321
1963	22,321,527	45,349,069	67,670,596
1964	24,185,416	50,825,912	75,011,328
1965	25,053,730	52,982,656	78,036,386
Projected			
1966	26,131,040	57,539,164	83,670,204
1967	27,254,675	62,487,532	89,742,207
1968	28,426,626	67,861,460	96,288,086
1969	29,648,970	73,697,545	103,346,515
1970	30,923,876	80,035,533	110,959,409
1971	32,253,602	86,918,589	119,172,191
1972	33,640,507	94,393,587	128,034,094

TABLE XII

REVENUES FOR BOND REDEMPTION

Year	No. of Students	State Money @ $115	District Money	Total Payment	District Tax Rate
1968-69	449	$ 51,635	$17,965	$ 69,600	.0186
1969-70	683	78,545*	0	69,600	0
1970-71	831	95,565	4,435	100,000**	.0040
1971-72	976	112,240*	0	100,000	0
1972-73	1,042	119,830*	0	100,000	0

* Surplus can be saved for future construction

** This increase is based on the assumption that additional bonds will be voted and sold to finance additions to the college.

Other Building Costs. Some buildings cannot be financed with district funds. Dormitories, faculty housing, student centers, and stadia must be financed with revenue bonds. The rental from housing, bookstore and snack bar profits, etc., must yield enough funds to retire the debt. A summary of these building requirements follows.

Student Center	8,000 sq. ft.	
Cost: 8000 x $18.00/sq. ft.		$144,000
Dormitories, (1st year)	83,200 sq. ft.	
Cost: 83,200 x $12.00/sq. ft.		$998,400
Total Revenue Bonds Needed =		$1,142,400
Yearly Debt Service Requirement		
(Assuming 30-year bonds bearing 4½% interest). =		$69,467

NOTE: The dormitory debt service could be paid by charging dormitory students $15.00 per month. Operational costs of dormitories would be in addition to this requirement.

Financing The Operational Expenses

Educational Program. The educational program will be financed by monies from federal, state, and local sources. Assuming that an Apache-Navajo junior college district has two colleges and that each receives prorata financing, the following tabulation indicates the expenditures and receipts for one of the colleges.

OPERATIONAL COSTS

Year	No. of Students	Estimated Cost Per Student	Total Cost	State Aid $525 1st 500 $350/student	Federal Funds (Estimated)	Local Funds
1968-69	449	$850	$381,650	$235,650	$25,000	$120,925
1969-70	683	750	512,250	326,550	35,000	150,700
1970-71	831	700	581,700	378,350	40,000	163,350
1971-72	976	700	683,200	429,100	45,000	209,100
1972-73	1,042	700	729,400	452,200	50,000	227,200

The local funds would come from the county property taxes with each county paying its prorata share based on the number of students from each county being educated. Were the tax levied equally in both counties, the projected local fund needs would require the following tax rates in the tax years 1968 through 1972: $.1255, $.1458, $.1366, $.1754 and $.1774. Were two colleges built in the district the rates would be multiplied by two.

Financing Student Expenses

Nature of Expenses. Many Navajo students come from homes with limited financial resources. If the student goes to college it is generally necessary to utilize a scholarship grant to pay transportation costs, books, registration fees, board, lodging, and incidental expenses. Students who will attend Navajo Community College will need financial assistance.

Recommended Type of Student Financial Aid. The survey team strongly recommends a work-study experience for all Navajo students. Several federal assistance programs have been established to provide financial assistance to students who come from homes with limited financial resources. Most of these programs require the student to work 15 hours per week and the rate of pay is $1.25 per hour. Local funds must be used in part. At the present time the local fund requirement is only 10 per cent of the total pay. However, in years to come the rate of local contribution will increase. The Navajo Scholarship Committee could find no better way to extend the benefits of scholarship money.

A summary of a student's income and expenses follows:

Work-Study Program Income:
15 Hrs. x $1.25 = $18.75/Week x 36 weeks = $675.00/year

A Student's Expenses:

Room Rent:	9 months x $20.00 =	$180.00
Meals :	9 months x $50.00 =	450.00
Books :		50.00
Incidentals:		100.00
	Total	$780.00

Some additional work opportunities would be needed to permit students to earn enough to pay the entire cost of attending school.

Financial Summary

State Money. If and when a Navajo Community College receives legislative approval, the college will receive $500,000 in state money for buildings. Upon commencing operation the college will receive $115 per student on an annual basis to help pay capital outlay costs.

Federal Funds. Some funds under the Vocational Education Act of 1963 and the Higher Facilities Act of 1965 will be available for buildings and equipment. Some equipment will be reimburseable with funds from the National Defense Education Act. Operational funds, although limited, are available under several federal acts. Student loans are available under the Higher Education Act and National Defense Education Act. Grants are also possible under the Higher Education Act, Title IV. Work-study programs can be financed under the Vocational Education Act and Economic Opportunity Act. Grants for vocational training are also available under the Manpower Development and Training Act.

Local Funds. If sufficient funds are not immediately available from the state and federal governments, and they probably won't be, the local joint-county junior college district can vote sufficient bonds to provide the necessary buildings. Even if the people decide to build two junior colleges, sufficient funds can be secured. The annual receipts of capital outlay money from the state would go far in meeting the debt service payments to pay bond interest and for bond retirement.

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APPENDIX

APPENDIX A

SUGGESTED CURRICULA - NAVAJO COMMUNITY COLLEGE

I. REQUIRED SUBJECTS

The following subjects are required of all students pursuing a transfer program or a terminal two-year program leading to a diploma. Insofar as practicable, these subjects will also be taken by students pursuing a one-year or two-year terminal program leading to a certificate.

Courses	1st Sem.	2nd Sem.	3rd Sem.	4th Sem.
English	*3	3		
Humanities - Speech	3	3		
Government	1	1	1	1
Physical Education	1	1	1	1
Totals	8	8	2	2

*ALL NUMERALS UNDER DESIGNATED SEMESTERS THROUGHOUT THIS SECTION OF THE REPORT REFER TO THE NUMBER OF SEMESTER HOURS OF CREDIT RECEIVED FOR THE LISTED COURSES.

II. TRANSFER CURRICULA

Agriculture

Courses	1st Sem.	2nd Sem.	3rd Sem.	4th Sem.
Required Subjects	8	8	2	2
Chemistry	4	4		
Crop Production - Livestock Production	3	3		
Agricultural Math - Dairy Production	2	2		
Botany - Zoology			4	4
Organic Chemistry - Quantitative Analysis			4	4
Soils & Fertilizers - Farm Economics & Fin.			3	3
Livestock Mktg. & Prod. - Vegets. & Specialty Crops			2	2
Elective - Farm Machinery Maintenance			3	3
Totals	17	17	18	18

Art

Required Subjects	8	8	2	2
Basic Design	3	3		
Drawing & Composition - Beginning Painting	2	3		
College Algebra - Psychology	3	3		
Social Science Elec. - Science Elec.			3	4
Art History			2	2
Life Drawing - Sculpture			3	3
Crafts - Ceramics			3	3
Electives			3	3
Totals	16	17	16	17

Courses	1st Sem.	2nd Sem.	3rd Sem.	4th Sem.
Behavioral Science				
Required Subjects	8	8	2	2
Sociology - Psychology	3	3		
Western Civilization	3	3		
Philosophy - Anthropology	3	3		
Biology - Genetics			4	3
Social Problems - Social Psychology			3	3
Philosophies of the World - Ethnic Group Relations			3	3
Marriage & The Family - Social Science Elec.			3	3
Electives			2	3
Totals	17	17	17	17
Business				
Required Subjects	8	8	2	2
Intro. to Business - Business Calc.	3	3		
Accounting	3	3		
Economics - Psychology	3	3		
Sociology - Science Elec.			3	4
College Algebra - Personnel Administration			3	3
Business Statistics - Bus. Communications			3	3
Business Law - Economic Geography			3	3
Electives			3	2
Totals	17	17	17	17
Data Processing				
English	3	3		
Government	1	1	1	1
Physical Education	1	1	1	1
College Algebra - Trigonometry	3	3		
Physics	4	4		
Data Processing - Basic Computer Systems	3	3		
Humanities - Speech			3	3
Analytic Geometry - Calculus			3	3
Computer Programming			3	3
Systems Design & Analysis			3	3
Elective - Control Panel Principles			3	3
Totals	15	15	17	17

Courses	1st Sem.	2nd Sem.	3rd Sem.	4th Sem.
English				
Required Subjects	8	8	2	2
Western Civilization	3	3		
Philosophy - Psychology	3	3		
American Literature - English Literature	3	3		
English Literature - World Literature			3	3
Public Speaking - Composition			3	3
Advanced English			3	3
College Algebra - Science Elective			3	4
Electives			3	2
Totals	17	17	17	17
Forestry				
Required Subjects	8	8	2	2
Chemistry	4	4		
Zoology - Botany	4	4		
Geology - Physics			4	4
Economics - Geography			3	3
Sociology - Psychology			3	3
College Algebra - Personnel Administration			3	3
Forestry Laboratory			2	2
Totals	16	16	17	17
Home Economics				
Required Subjects	8	8	2	2
Sociology - Psychology	3	3		
Nutrition	3	3		
Applied Food Principals - Quantity Cooking	3	3		
Chemistry			4	4
Resources Management - Institutional Food Purchasing			3	3
Institutional Food Service - Accounting			3	3
Family Living - Personnel Administration			3	3
Diet Therapy - Practicum in Food Service			2	2
Totals	17	17	17	17
Journalism				
Required Subjects	8	8	2	2
Journalism	3	3	3	3
American Literature - English Literature	3	3		
U.S. History	3	3		
Sociology - Philosophy			3	3
Photography			3	3
Biology - College Algebra			4	3
Creative Writing - Publications Laboratory			2	3
Totals	17	17	17	17

Courses	1st Sem.	2nd Sem.	3rd Sem.	4th Sem.
Life Science				
Required Subjects	8	8	2	2
Biology	4	4		
Physiology - Microbiology	4	4		
Chemistry			4	4
Genetics - Anatomy			3	4
College Algebra - Social Science Elective			3	3
Electives			4	3
Totals	16	16	16	16
Mathematics				
Required Subjects	8	8	2	2
College Algebra & Trigonometry	6			
Elective	2			
Analytic Geometry & Calculus		3		
Chemistry		4		
Analytic Geometry & Calculus			3	3
Physics			4	4
Western Civilization			3	3
Electives			5	5
Totals	16	15	17	17
Medical Technology				
Required Subjects	8	8	2	2
Chemistry - Qualitative Analysis	4	4		
Mathematics - Biology	3	4		
Quantitative Analysis - Physics			4	4
Microbiology - Genetics			4	4
Anatomy - Physiology			4	4
Electives			3	3
Totals	15	16	17	17
Music				
Required Subjects	8	8	2	2
Introduction to Music	2	2		
Fundamentals of Music	2	2		
Applied Music - Private Instruction	2	2		
Chorus or Band	2	2		
Ensemble	1	1		
Integrated Theory			3	3
Applied Music - Private Instruction			2	2
Chorus or Band			2	2
*Class Piano or Class Voice			2	2
Ensemble			1	1
Electives			5	5
Totals	17	17	17	17

*Piano majors would not take piano class, nor voice majors the voice class.

Courses	1st Sem.	2nd Sem.	3rd Sem.	4th Sem.
Nursing				
Required Subjects	8	8	2	2
Intermediate Algebra - College Algebra	3	3		
Chemistry	4	4		
Organic Chemistry - Microbiology			4	4
Nutrition - Intro. to Anthropology			4	3
Sociology - Psychology			3	3
Electives - *Physics or Electives			4	4
Totals	15	15	17	16

*high school Physics may substitute for this course.

Physical Science				
Required Subjects	8	8	2	2
College Algebra - Trigonometry	3	3		
Chemistry	4	4		
Analytic Geometry & Calculus			3	3
Physics			4	4
Social Science Elective - Life Science Elec.			3	4
Electives			5	4
Totals	15	15	17	17
Social Science				
Required Subjects	8	8	2	2
Western Civilization	3	3		
Elements of Geography - Economic Geography	3	3		
Sociology - Psychology	3	3		
U.S. History			3	3
American Government - State & Local Government			3	3
Economics - Public Administration			3	3
American Literature - English Literature			3	3
Philosphy - Elective			3	3
Totals	17	17	17	17
Spanish				
Required Subjects	8	8	2	2
Spanish	3	3	3	3
South American History - Spanish Literature	3	3		
Sociology - Psychology	3	3		
Advanced Speech			3	3
Math or Science Elective - Science Elec.			3	4
Electives			6	5
Totals	17	17	17	17

Courses	1st Sem.	2nd Sem.	3rd Sem.	4th Sem.
Speech Arts				
Required Subjects	8	8	2	2
Parliamentary Procedure - Remedial Speech	2	2		
Introduction to Drama - Discussion Techniques	3	3		
Sociology - Psychology	3	3		
Public Speaking - Drama Performance			3	3
Biology - Physical Science Elective			4	4
English Composition			3	3
American Literature - English Literature			3	3
Electives			3	3
Totals	16	16	18	18
III. TERMINAL CURRICULA				
Aeronautical Technology				
Required Subjects	8	8	2	2
College Algebra - Tigonometry	3	3		
Technical Drawing	3	3		
Aeronautical Welding - Metal Aircraft Structures	3	3		
Composite Aircraft Structures - Aircraft Maintenance			4	4
Physics			4	4
Basic Electronics - Powerplant Accessories			3	3
Aircraft Powerplants - Powerplant Maintenance			4	4
Totals	17	17	17	17
Agricultural Production				
Required Subjects	8	8	2	2
Botany - Zoology	4	4		
Crop Production - Livestock Production	3	3		
Agricultural Math. - Farm Economics & Financing	3	3		
Chemistry - Soils & Fertilizers			4	3
Farm Machinery Operation - Maintenance & Repair			3	3
Livestock Marketing - Livestock Health & Sanitation			3	3
Vegetable & Specialty Crops - Crop Marketing			3	3
Livestock Marketing & Utilization - Poultry Production			3	3
Totals	18	18	18	17

Courses	1st Sem.	2nd Sem.	3rd Sem.	4th Sem.
Air Conditioning & Refrigeration				
Required Subjects	8	8	2	2
Technical Mathematics	3	3		
Technical Science - Blueprint Reading	3	3		
Basic Electronics - Sheetmetal	3	3		
Heating Principles - Refrigeration Principles			3	3
Industrial Electronics - Building Const.			3	3
Air Conditioning Controls - Technical Report Writing			3	3
Air Conditioning Laboratory			6	6
Totals	17	17	17	17
Automotive Body Repair (2-Year Certificate)				
Required Subjects	8	8	2	2
Blueprint Reading & Sketching - Auto Finishing	3	3		
Welding	3	3		
Auto Body Repair	3	3		
Auto Chassis			3	3
Trimming - Finishing & Painting			3	3
Auto Body Repair			6	6
Business Management - Electives			3	3
Totals	17	17	17	17
Automotive Mechanics (2-Year Certificate)				
Required Subjects	8	8	2	2
Technical Mathematics	3	3		
Automotive Theory	2	2		
Automotive Mechanics	4	4		
Machine Shop - Welding			3	3
Technical Science - Business Management			3	3
Automotive Electrical Systems - Servicing & Diagnosis			3	3
Automotive Shop Practice			6	6
Totals	17	17	17	17
Barbering				
Required Subjects	8	8	2	2
Biology - Bacteriology	4	4		
Barbering	4	4		
Professional Ethics - Bus. Management			3	3
Hair Styling - Scalp Treatment			3	3
Mathematics - Sanitation			3	2
Arizona Law				1
Barbering			6	6
Totals	16	16	17	17

Courses	1st Sem.	2nd Sem.	3rd Sem.	4th Sem.
Building Construction (2-Year Certificate)				
Required Subjects	8	8	2	2
Technical Mathematics	3	3		
Blueprint Reading - Architectural Drafting	3	3		
House & Roof Framing - Masonry	3	3		
Cabinetmaking			3	3
Architectural Drafting - Business Mgr.			3	3
Technical Information			3	3
Mill Work - Surveying			3	3
Building Construction Laboratory			3	3
Totals	17	17	17	17
Business - General Business				
Required Subjects	8	8	2	2
Intro. to Business - Psychology	3	3		
Typewriting - Accounting	3	3		
Business Calculations - Machine Calculations	3	3		
Business Communications - Economics			3	3
Marketing & Management - Office Management			3	3
Accounting - Work Experience			3	3
Data Processing			3	3
Electives			3	3
Totals	17	17	17	17
Business Office Services				
Required Subjects	8	8	2	2
Intro. to Business - Psychology	3	3		
Typewriting	3	3		
Business Calculations - Machine Calculations	3	3		
Office Filing - Record Keeping			2	2
Typewriting - Data Processing			3	3
Clerical Procedures Laboratory			3	3
Sociology - Science			3	4
Electives			4	3
Totals	17	17	17	17

Courses	1st Sem.	2nd Sem.	3rd Sem.	4th Sem.
Business - Stenographer-Secretary (2-Year Certificate)				
Required Subjects	8	8	2	2
Intro. to Business - Office Filing & Record Keeping	3	3		
Typewriting	3	3		
Shorthand	3	3		
Business Calculations - Machine Calculations			3	3
Data Processing			2	2
Oral Communication & Personality Development - Business Communication			3	3
Advanced Typewriting - Transcription			3	3
Office Appliances - Secretarial Acctg.			3	3
Advanced Clerical Procedures			1	2
Totals	17	17	17	18
Commercial Art				
Required Subjects	8	8	2	2
Basic Design	3	3		
Drawing & Composition	2	2		
Art History	2	2		
Salesmanship - Photography	2	3		
Photography - Graphic Arts			3	3
Intro. to Business - Principals of Advertising			3	2
Life Drawing			2	2
Advertising Art			3	3
Lettering - Salesmanship			2	2
Mathematics - Science			3	4
Totals	17	18	18	18
Cooking & Baking (2-Year Certificate)				
Required Subjects	8	8	2	2
Sanitation - Menu Planning	3	3		
Nutrition - Equipment & Layout	3	3		
Intro. to Food Preparation - Intermed. Cooking	3	3		
Purchasing, Storage & Record Keeping - Accounting			3	3
Microbiology - Catering			4	3
Intermediate Baking - Advanced Baking			3	3
Advanced Cooking - Quantity Foods			3	3
Personnel Administration - Experimental Cookery			3	3
Totals	17	17	18	17

Courses	1st Sem.	2nd Sem.	3rd Sem.	4th Sem.
Cosmetology				
Required Subjects	8	8	2	2
Bacteriology - Sanitation	4	2		
Cosmetology	3	5		
Cosmetology			5	5
Mathematics - Business Management			3	3
Hair Styling - Scalp & Hair Treatment			3	3
Cosmetology Laboratory			4	4
Totals	15	15	17	17
Data Processing Technology (2-Year Certificate)				
English	3	3		
Government	1	1		
Physical Education	1	1		
College Algebra - Trigonometry	3	3		
Intro. to Data Processing - Basic Computer Systems	3	3		
Accounting	3	3		
Punched Card Equipment	3	3		
Humanities - Speech			3	3
Government			1	1
Physical Education			1	1
Computer Programming			3	3
Systems Design & Analysis			3	3
Accounting Machines - Control Panel Principles			4	3
Advanced Mathematics			3	3
Totals	17	17	18	17
Distributive Education				
Required Subjects	8	8	2	2
Business Calculations - Accounting	3	3		
Salesmanship - Marketing	3	3		
Intro. to Business - Economics	3	3		
Science Elective - Bus. Communications			4	3
Sales Promotion - Business Law			3	3
Retailing Laboratory - Management Lab.			6	6
Elective - Mathematics			2	3
Totals	17	17	17	17

Courses	1st Sem.	2nd Sem.	3rd Sem.	4th Sem.
Drafting Technology				
Required Subjects	8	8	2	2
Algebra - Trigonometry	3	3		
Technical Drawing	6	6		
General Metals			3	3
Technical Drafting			6	6
Industrial Illustration - Technical Report Writing			3	3
Machine Shop - Physics			3	4
Totals	17	17	17	18
Electronic Maintenance & Repair (2-Year Certificate)				
Required Subjects	8	8	2	2
Related Mathematics	3	3		
Related Shop Science	3	3		
Radio and Television	3	3		
Radio and Television			3	3
Related Mathematics - Related Shop Science			3	3
Blue Print Reading & Sketching - Business Management			3	3
Radio and Television Shop Practice			6	6
Totals	17	17	17	17
Electronics Technology				
English	3	3		
Government	1	1		
Physical Education	1	1		
Algebra - Trigonometry	3	3		
Technical Drawing - Physics	3	4		
Basic Electronics	3	3		
Electronic Circuits - Industrial Electronics	3	3		
Humanities - Speech			3	3
Government			1	1
Physical Education			1	1
Calculus			3	3
Electronic Circuit Analysis - Electronic Control Circuit Analysis			3	3
Tube & Transistor Circuits - Advanced Circuit Analysis & Testing			3	3
Electives			3	3
Totals	17	18	17	17

Courses	1st Sem.	2nd Sem.	3rd Sem.	4th Sem.
Heavy Equipment Operation (1-Year Certificate)				
English	3	3		
Government	1	1		
Physical Education	1	1		
Diesel Engines - Vehicle Laboratory	2	2		
Blue Print Reading & Sketching - Practical Surveying	3	2		
Acetylene Welding - Electric Arc Welding	3	3		
Equipment Laboratory	5	5		
Totals	18	17		
Lodging & Food Management				
Required Subjects	8	8	2	2
Housing & Feeding - Food Preparation	3	3		
Accounting	3	3		
Purchasing & Storage - Menu Planning	3	3		
Sanitation - Bacteriology			3	4
Motel & Food Cost Accounting - Mathematics			3	3
Equipment and Layouts - Personnel Admin.			3	3
Food Service Administration - Catering			3	3
Psychology - Front Office Operation			3	3
Totals	17	17	17	18
Machine Shop (2-Year Certificate)				
English	3	3		
Government	1	1		
Physical Education	1	1		
Related Mathematics	3	3		
Technical Drawing	3	3		
Machine Shop - Machine Tool Operations	6	6		
Humanities - Speech			3	3
Government			1	1
Physical Education			1	1
Acetylene Welding - Electric Arc Welding			3	3
Testing & Measurement - Production Tooling			3	3
Machine Tool Process - Machine Elements			6	6
Totals	17	17	17	17

Medical Laboratory Technician

Courses	1st Sem.	2nd Sem.	3rd Sem.	4th Sem.
Required Subjects	8	8	2	2
Inorganic Chemistry - Qualitative Analysis	4	4		
Integrated Mathematics - Biology	3	4		
Quantitative Analysis - Physics			4	4
Microbiology - Genetics			4	3
Anatomy & Physiology			4	4
Integrated Mathematics - Psychology			3	3
Totals	15	16	17	16

Music

Required Subjects	8	8	2	2
Intro. to Music	2	2		
Fundamentals of Music	2	2		
Applied Music - Private Instruction	2	2		
Chorus or Band	1	1		
Ensemble	1	1		
Mathematics - Science			3	4
Music Theory			3	3
Applied Music - Private Instruction			2	2
Chorus or Band			1	1
Ensemble			1	1
Electives			3	3
Totals	16	16	15	16

Nursing (2-Year Certificate)

Required Subjects	8	8	2	2
Human Anatomy & Physiology	3	3		
Microbiology	4			
Nursing	2	5		
Psychology - Sociology			3	3
Psychiatric Nursing - Trends in Nursing			5	2
Maternal & Child Nursing - Medical and Surgical Nursing			8	8
Child Growth & Development				3
Totals	17	16	18	18

Courses	1st Sem.	2nd Sem.	3rd Sem.	4th Sem.
Petroleum Technology				
English	3	3		
Government	1	1		
Physical Education	1	1		
Mathematics - Inorganic Chemistry	3	4		
Petroleum Technology	7	7		
Humanities - Speech			3	3
Government			1	1
Physical Education			1	1
Organic Chemistry - Mathematics			4	3
Petroleum Technology			7	7
Totals	15	16	16	15
Physical Education				
Required Subjects	8	8	2	2
Physical Education Survey - Community Recreation	2	2		
Safety Education & First Aid - Mathematics	3	3		
Physical Education Activities for Men (Women)	2	2		
Physical Education Electives	2	2		
Physical Education for Co-Ed. Sports			2	2
Sports Officiation			2	2
Health Education - Elective			2	2
Anatomy or Physiology - Biology			3	4
Physical Education Electives			6	6
Totals	17	17	17	18
Photography				
Required Subjects	8	8	2	2
Photography	3	3	3	3
Art	3	3		
Psychology - Sociology	3	3		
Chemistry			4	4
Design & Composition - Shop Management			3	3
Mathematics			3	
Electives			2	5
Totals	17	17	17	17

Courses	1st Sem.	2nd Sem.	3rd Sem.	4th Sem.
Police Science				
Required Subjects	8	8	2	2
Psychology - Sociology	3	3		
Intro. to Law Enforcement - Criminal Investigation	3	3		
Safety Education & First Aid - Typewriting	3	3		
Mathematics - Chemistry			3	4
Criminal Law - Criminal Evidence			3	3
Juvenile Procedures - Traffic Control			3	2
Firearms - Defensive Tactics			1	1
Patrol Procedures - Criminal Investigation			3	3
Electives			2	2
Totals	17	17	17	17
Printing (2-Year Certificate)				
Required Subjects	8	8	2	2
Related Mathematics	3	3		
Composition & Makeup	3	3	3	3
Presswork	3	3	2	2
Bindery			2	2
Stereotyping - Communications			2	2
Machine Composition			2	2
Offset Presswork			2	2
Offset Camera & Platemaking			2	2
Totals	17	17	17	17
Welding (2-Year Certificate)				
English	3	3		
Government	1	1	1	1
Physical Education	1	1	1	1
Related Mathematics	3	3		
Technical Drawing - Machine Shop	3	3	3	3
Acetylene Welding	3	3		
Electric Arc Welding	3	3	3	3
Flame Cutting & Welding			3	3
Inert Gas Welding - Welding Metallurgy			3	3
Humanities - Speech			3	3
Totals	17	17	17	17
X-Ray Technician (1-Year Certificate)				
Required Subjects	8	8		
Integrated Mathematics - Physics	3	4		
Anatomy or Physiology	4	4		
Totals	15	16		

APPENDIX B

NAVAJO COLLEGE STUDENT QUESTIONNAIRE

Date __________ 1965

1. Name ________________________________ Age ______
2. Home Address ________________________________
3. High School Attended ____________________ Year Graduated _____
4. Ages of brothers ____, ____, ____, ____, ____, ____, ____
5. Ages of sisters ____, ____, ____, ____, ____, ____, ____
6. Major sources of family income during the past two years:

____

____

7. List of brothers and sisters who have taken post-high school work:

Name	School	Location	Dates Attended

Additional names on back side of this page /___/

8. List of schools that you have attended since high school graduation:

School	Location	Dates Attended	Program Pursued

9. Why did you decide to attend this institution?

It was recommended by: ____ my friends ____ my relatives ____ my principal

____ a counselor ____ my family ____ a teacher ____ a coach

____ it offers a program that I wanted ____ less expensive

____ other: ________________________________

10. Had there been a junior college on or near the Navajo Reservation would you have considered attending it upon high school graduation? Yes ____ No ____

11. Kind of life-time employment that you want? ______________________________

12. After college, where do you hope to live and work? ________________________

13. After college, do you plan to help the Navajo people? Yes ____ No ____ If so, how? ____

14. What do you anticipate that each of the following will cost you during this year in college?

Registration Fees	$ __________	Transportation . .	$ __________
Books	$ __________	Recreation	$ __________
Food	$ __________	Clothing	$ __________
Housing	$ __________	Life Insurance . .	$ __________
Laboratory Fees .	$ __________	Incidentals . . .	$ __________

Other expenses, indicate ____________________________________ $ __________

____________________________________ $ __________

15. From what sources do you expect to get your college expenses this year?

Your own savings . .	$ __________	Your parents . . .	$ __________
Work while in school	$ __________	Your relatives . .	$ __________
Personal loan . . .	$ __________	Tribal scholarship	$ __________
B.I.A. Scholarship .	$ __________	Other sources: (Indicate)	
		__________________	$ __________
		__________________	$ __________

16. What do you think is the primary reasons for Navajo students to drop out of college? (List one or more).

____ Lack of sufficient funds

____ Inadequate academic preparation

____ Not socially acceptable on campus

____ Unsympathetic instructors

____ Lack of effort

____ Desire to return to family and friends

____ Marriage

____ Alcohol problem

Other (Indicate) ____

APPENDIX C

QUESTIONNAIRE FOR HIGH SCHOOL GRADUATES
(Since January 1961)

Date ____________ 1965

1. Name ____

2. Residence ____

3. High School ______________________ Year Graduated ________

4. Marital Status: Single _____ Married _____ No. of Children __________

5. List colleges attended, dates and program pursued:

Colleges	Dates	Program Pursued

6. Reason for dropping out of college: ______________________

____

7. Reason for not going to college: ______________________

____

8. Current employment: ______________________________

9. Kind of life-time employment that you would like: ______________

____

10. Will further education or training be required in order for you to qualify for the kind of employment that you would like: Yes ____ No ____

11. Are you planning to secure further education or training? Yes ____ No ____

12. If you plan to return to school for further education, what percentage of finances would you expect to secure from each of the following sources:

Your own savings	________%	Your parents	________%
From relatives	________%	Tribal Scholarship	________%
Work while in school	________%	B.I.A. Scholarship	________%
Personal Loan	________%	Other Sources: (Indicate)	
		______________	________%

13. Had there been a junior college on the Navajo Reservation would you have considered attending it upon high school graduation? Yes ____ No ____

14. Names of brothers and sisters now attending college:

Name	College	First Enrolled

APPENDIX D

QUESTIONNAIRE

for

NAVAJO PARENTS OF HIGH SCHOOL GRADUATES

1. Name ______________________________

2. Home Address ______________________________

3. Children who completed high school:

Name	Sex M F	High School Completed	Year	College Attended	Year

Additional names are found on back side /___/

4. Did you want your children to go to college? Yes ____ No ____

5. If answer to #4 was "No", explain ______________________________

____

6. If there were a junior college on the Navajo Reservation, would you want, or have wanted, your children to attend? Explain ______________________________

____

____

7. Indicate major sources of family income during the past two years:

____

____

____